

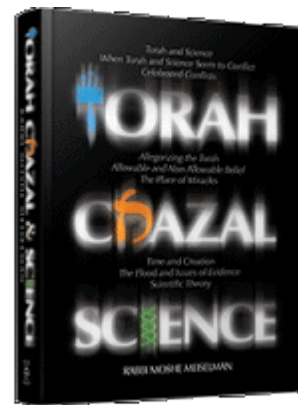
# Critique of *Torah, Chazal and Science*

A collection of posts by Rabbi Natan Slifkin

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I was unsure whether to begin this post with a description of my personal history with Rabbi Meiselman. Some would doubtless use it to brand me as petty or vengeful. But if I left it out, others (or perhaps even the same people) would say that I am trying to conceal a personal agenda. And so I have decided to present it.



During the [Great Torah-Science Controversy](#) of 2004-5, Rabbi Moshe Meiselman of Jerusalem attained notoriety for being by far the most vicious of my rabbinic opponents. The series of lectures that he delivered at Toras Moshe about my books was noteworthy for three reasons. One was that he repeatedly engaged in ad hominem insults. Two was that he engaged in the most bizarre and nasty slander, claiming that I had been thrown out of yeshivah in England for bad behavior (!). Three was that while he doubtless has many points of genuine disagreement with me, almost every single one of his references to my works, that he mentioned in order to refute, was something that is not in my works and which I never actually said.

I wrote a [polite but forceful letter](#) to Rabbi Meiselman in which I pointed all this out, but he neither retracted his slander nor responded to me. Since it was difficult for some people to believe that the reports that he was spreading about me and my work stemmed from nastiness rather than being an honest portrayal, and my account of his behavior was rather surprising and likewise hard for people to believe, I [uploaded his three lectures](#) to my website so that people could judge for themselves. Many people, including some supporters of Toras Moshe, were shocked at Rabbi Meiselman's behavior, and protested to him.

At this point Rabbi Meiselman initiated his only communication to me, requesting me to remove the recordings from my website. I saw no reason to do so. In a subsequent interview with the Five Towns Jewish Times, Rabbi Meiselman claimed that "I never gave shiurim on this in my beis midrash. Someone taped a conversation that I had with some talmidim." This was, however, contradicted by the very first words of Rabbi Meiselman's first lecture, in which he stated that "he decided to discuss this with the entire student body."

Possibly in an attempt to draw attention away from his lectures and regain credibility, Rabbi Meiselman decided to publish a lengthy book on the topic of Torah, Chazal and science, which was released this week and is descriptively titled *Torah, Chazal and Science*. In this book, Rabbi Meiselman does not issue any explicit ad hominem attacks on me at all; in fact, although he references countless sources, from both believers and atheists, he does not reference my books at all. However, although he claims that his book “is not directed against any single author,” there is no great mystery as to who he has in mind when he constantly refers dismissively to books on Torah and science written by “amateurs” (as though if I were a professional scientist, I would not believe that the world is billions of years old!) In addition, on several occasions Rabbi Meiselman issues rebuttals to the claims of “some writers,” where he is invariably referring to me; but on each occasion he is misrepresenting what I wrote. For example, on p. 262 he argues against the claim of “some modern authors,” who mistakenly believe that Chazal’s rule about animals lacking upper teeth being kosher is meant to be absolute, and who point out counterexamples. But in fact the conclusion and purpose of my discussion in [\*The Camel, The Hare And The Hyrax\*](#) is that Chazal’s rule about upper teeth is *not* meant to be absolute. Just as he did in his lectures, Rabbi Meiselman is still misrepresenting my views.

I will be reviewing Rabbi Meiselman's book in a series of posts, but let's start with something basic. One of the first aspects of the book that stands out is the conspicuous absence of comments from other people. Books in this genre usually include approbations or praise from various authorities and experts. But in Rabbi Meiselman's book, there are no approbations, nor sentences of praise of any sort. There is nothing from Gedolei Torah, nothing from academic scholars of Jewish studies, nothing from scientists.

This may seem surprising, until one reads the book and realizes why nobody will put their name on it. Presumably, no Gadol will endorse a book that repeatedly asserts that all the Rishonim and Acharonim were wrong (as I will detail in a forthcoming post). Presumably, no charedi Gadol will endorse a book that repeatedly and reverentially refers to Rav Soloveitchik (even though R. Meiselman portrays Rav Soloveitchik in a charedi revisionist way that is not shared by any other family member or disciple of the Rav), while no non-charedi Gadol will endorse a book that engages in charedi revisionism of Rav Soloveitchik. No academic scholar of Jewish studies will endorse a book that is so ahistorical in its approach to Chazal and that is so intellectually dishonest in its discussion of sources. No scientist (outside of Christian fundamentalists) will endorse a book that insists that all science dealing with periods longer than 5773 years ago – astronomy, geology, paleontology, biology, archeology – is nonsense.

With no endorsement from authorities in Torah or science, Rabbi Meiselman resorts to presenting himself as an authority. Time and again, he speaks dismissively of “amateurs” who address these topics (in fact, I've almost never seen a book that spends so much time denigrating others). In the first pages of the preface, and again on pp. 673-4, he stresses that this topic can only be addressed by people with “training in the sciences.” He repeatedly condemns literature on Torah and science that “has not been written by people trained simultaneously in Torah and science.” The back flap states that Rabbi Meiselman was “trained by some of the greatest names in mathematics, philosophy and the sciences at two of America’s premier universities.”

Yet Rabbi Meiselman himself is not extensively trained in the natural sciences! What the back flap does not reveal is that his degree is in mathematics. As we will see in reviewing the book, Rabbi Meiselman has no knowledge of even the basics of astronomy, geology, paleontology, archeology, and biology - all fields in which he claims to have fundamentally refuted the most basic facts. Even more to the point, the "greatest names in mathematics, philosophy and the sciences" that taught Rabbi Meiselman "at two of America's premier universities" would consider his theories in these areas to be amateur nonsense. Claiming that his work has scientific authority on the grounds that he was trained by the greatest names in science is like claiming that Louis Jacobs had Orthodox rabbinic authority because he was taught by Rav Dessler.

## **R. Meiselman: All The Rishonim Were Wrong, Again And Again And Again**

In the prologue to his book, Rabbi Meiselman sets out the fundamentals of his approach. He takes a very firm and devout theological position:

"We do not impose our ideas upon the Tannaim, Amoraim, Rishonim or major Acharonim, nor do we attempt to understand the Gemara without their assistance. Our goal is to try to comprehend how those previous generations understood it; to view it through the prism of their writings. We submit to the authority of our great predecessors." (p. XXX)

Rabbi Meiselman stresses this point again and again. He cites a story about how Rav Soloveitchik said that we cannot say that Ramban was wrong about something, and he gives the principles of how we must relate to the Rishonim:

"Among those whom the Mesorah has labeled Rishonim we never pick and choose... Certainly we do not invoke criteria external to the Torah in evaluating the correctness of their views..." (p. XXXI)

And he succinctly explains why only a person who has this proper approach (i.e. himself) is able to arrive at correct conclusions in these matters:

"Only one who approaches his studies with the recognition that scholars of previous generations were incalculably wiser and more attuned to the sources than we are, can ever really understand the Torah." (p. xxxi)

This all sounds very traditionalist, expressing the most conservative and Charedi approach. It's presented as key characteristic of the book, even mentioned on the back cover: "Remaining true to the classic sources is the best way to let the Torah's light shine forth." Rabbi Meiselman engages in constant, constant, lengthy condemnations of those who do not have the right approach in such matters – as I mentioned yesterday, I've never seen a work spend so much time issuing condemnations of everyone who has the "wrong" approach. He stresses that :

“Whoever wishes to be considered within the bounds of the Mesorah must take it as his point of departure.” (p. xxxvi)

The problem is that when we get to the main body of the book, and actually deal with Chazal’s statements about the natural world, Rabbi Meiselman tosses this approach out of the window!

I will be dealing with each of these topics in more detail in separate posts, but for now let us briefly note Rabbi Meiselman’s approach in several cases (with some direct quotations in parentheses at the end of each paragraph):

- Chapter 10 deals with Chazal’s statements about the sun’s path at night, which all the Rishonim understand as saying that the sun goes behind the sky at night. Rabbi Meiselman says that all the Rishonim were wrong. (“...their interpretations are evidently incorrect,” in the section boldly titled “When the Commentaries are Mistaken.”)
- Chapter 22 deals with Chazal’s statements about the development of insects, which all the Rishonim and Acharonim explain as referring to spontaneous generation. Rabbi Meiselman says that Chazal were not talking about any such thing, and all the Rishonim and Acharonim were wrong. (“The Rishonim and Acharonim interpreted the Gemara in terms familiar to them... This does not mean that that is what Chazal had in mind, nor does it compel us to interpret the Gemara in the same way.”)
- Chapter 23 deals with the mud mouse, which all the Rishonim and Acharonim understand to mean that Chazal believed in the existence of a mouse that spontaneously generates from mud. Rabbi Meiselman says that Chazal did not mean any such thing, and all the Rishonim and Acharonim were wrong. (“The Rishonim make no claim, however, that their understanding of Chazal is complete and perfect.”)
- Chapter 24 deals with Chazal’s description of a creature that nurses its young and yet lays eggs and is called *atalef*, which all the Rishonim and Acharonim understand to refer to the *atalef* of the Torah, i.e. a bat. Rabbi Meiselman says that Chazal did not mean any such thing, and all the Rishonim and Acharonim were wrong. (“Because our mesorah passes through them, and because we are aware of their intellectual greatness, we never take what the Rishonim say lightly. But when observable facts contradict their understanding...”)

So, again and again and again and again, Rabbi Meiselman declares that the Rishonim were all wrong in the way that they explained the Gemara. He has violated the very approach that he has insisted upon at the beginning of his book!

The reason why he ends up doing this is that he has put himself in an impossible position. On the one hand, he insists that any definitive statement about the natural world made by Chazal must be true. In addition, he insists that the Mesorah, and the explanations of the Rishonim, are unimpeachable. But on the other hand, he can’t avoid the fact that the sun does not go behind the sky at night, spontaneous

generation is false, mice do not develop from mud, and bats do not lay eggs. Something has to give, and rather than say that Chazal were not aware of contemporary knowledge about the natural world, Rabbi Meiselman chooses to say that the Rishonim did not know how to learn the Gemara (as well as their being unaware of contemporary knowledge about the natural world).

The result is that we have the extraordinary hypocrisy of Rabbi Meiselman repeatedly violating the very approach that he insisted upon as being required of Torah-true Jews. For all his pontificating about how we do not impose our ideas upon the Tannaim, about how we do not attempt to understand the Gemara without the Rishonim, about how they were incalculably wiser and more attuned to the sources than we are, about how we may never say that the Rishonim were wrong, he goes ahead and violates every one of those principles, time and time again!

But aside from the hypocrisy, where is the humility and respect for the Rishonim? Rabbi Meiselman has repeatedly condemned the “arrogance” of those who say that Chazal were mistaken about a scientific fact. Now, I don’t see how there is any arrogance involved; we are not positing that we are more intelligent than Chazal, just that we have the benefit of standing on the shoulders of centuries of accumulated scientific knowledge. But I don’t see any basis for claiming in these cases that the Rishonim misunderstood what Chazal were saying. On the contrary; since the Rishonim were much closer to Chazal, I think that there is every reason to believe that they understood the meaning of their discussions. It seems astonishing that Rabbi Meiselman, under the banner of humility, posits that all the Rishonim misunderstood Chazal, and only he has discovered Chazal’s true meaning!

The question is, what about Rav Elya Ber Wachtfogel, [who insists](#) that one must accept the way that the Rishonim explain Chazal, and that any other approach is heresy? Will he put Rabbi Meiselman’s book in *cherem*? Perhaps someone could show Rabbi Meiselman’s book to him and ask him for his response.

## Rabbi Meiselman Tries To Hide From The Sun

### I. The Most Crucial Topic



The dotted line depicts the path of the sun, according to the view of the Jewish sages.

As I have noted on many occasions, in any discussion about Chazal (the Sages) and science, the single most crucial section of the Talmud is that regarding the sun’s path at night, which I [discussed at length in a monograph](#). The Talmud records a dispute between the Sages of Israel and the gentile scholars

regarding where the sun goes when it sets in the evening. (This follows an earlier and more complex argument about the relative motions of the celestial sphere and the constellations, which is not relevant to our discussion.) The Sages of Israel believed that the sun changes direction at night to go back behind the sky (which was believed to be an opaque “firmament”), whereas the gentile scholars believed that the sun continues its path to pass on the far side of the world (which we now know to be correct). The Talmud continues to record that Rabbi Yehudah HaNasi observed that the gentile scholars appear to be correct. All the Rishonim, as well as many Acharonim, accept that the Gemara is recording a dispute about the sun’s path at night. The majority of Rishonim, as well as many Acharonim, accept that the Sages of Israel were incorrect.

Here, then, is the definitive demonstration that there is a mainstream approach of saying that Chazal’s knowledge about the natural world was not divine in origin, and is potentially errant. But Rabbi Meiselman, on the other hand, says that whenever Chazal make a definite statement about the natural world, or one that is based upon Scriptural exegesis, they are correct. He insists that it is forbidden to say otherwise, and his book is dedicated to rebutting, insulting, disparaging and condemning those who take a different view. How, then, does Rabbi Meiselman deal with this topic?

## **II. What Did Chazal Say, And What Did They Mean? Rabbi Meiselman Won’t Tell You**

Rabbi Meiselman discusses this topic over six pages in the second part of chapter ten. He quotes the Gemara, but does not translate the word “*rakia*.” In a footnote, he accounts for this by saying that although the standard translation is “firmament,” the precise meaning is a subject of debate among the commentators. In fact, 95% of the commentators, and 100% of the Rishonim, agree that it means “firmament.” One can almost always find someone who disagrees with a conventional translation, but that’s not a reason not to use it, unless one is deliberately trying to either distort the picture regarding the situation with the commentaries, or obfuscate the entire discussion by not explaining what the Gemara is about.

Rabbi Meiselman appears to be trying to do both. He begins his explanation of the Gemara, in a section entitled “What Did Chazal Mean?” by stating that “The cryptic nature of these discussions has caused them to be given a variety of explanations.” In fact, the discussion regarding the sun’s path at night is not cryptic in the least; the Talmud’s words are clear and straightforward. It only has a variety of explanations post-15th century, and the only reason for this is that many people were uncomfortable with Chazal having been mistaken on something that appears so basic to modern audiences. Rabbi Meiselman writes that “According to many commentaries they are not to be taken at face value at all.” Yes, but not according to *any* of the Rishonim.

Almost incredibly, Rabbi Meiselman does not make any mention of the straightforward meaning of this Gemara, adopted by all the Rishonim: that the sun changes direction to travel behind an opaque solid firmament at night. Nowhere does he present a simple, straightforward explanation of what the Gemara is talking about (or even any explanation). In a book spanning eight hundred pages, he couldn’t even spend a *single* paragraph explaining the meaning of the most crucial passage in the entire Torah-science

discussion?! Nor does he quote any of the Rishonim and Acharonim who explain the Gemara according to its straightforward meaning. Such a long book, so many hundreds and hundreds of sources quoted, including many that are barely relevant, but he does not quote any of the Rishonim on the most fundamental topic in the entire discussion!

After making the misleading claim that according to many commentaries the Talmud is not intended to be literal, Rabbi Meiselman states that “But even among those who take them literally, explanations vary.” He proceeds to cite “The Rama, for instance,” who has a highly creative reinterpretation of the Gemara. This reinforces the impression that there is only a small minority view that explains the Gemara according to its plain meaning – whereas the fact is that *all* the Rishonim, without exception, as well as many Acharonim, explain it in this way.

Rabbi Meiselman then spends a paragraph discussing geocentrism and heliocentrism. But this only relates to the earlier, more complex and irrelevant discussion in the Gemara about the celestial sphere and the constellations. Rabbi Meiselman avoids any further discussion of the passage in the Gemara regarding the sun’s path at night, never having once explained either its straightforward meaning or indeed any meaning. And thus he concludes the section entitled “What Did Chazal Mean?” - without having even attempted to answer that question.

### **III. Rabbi Meiselman Mistakenly Attributes Mistaken Beliefs To The Rishonim**

The next section is entitled “When The Commentaries Are Mistaken.” Here is where things get very strange. Throughout the rest of the book, while there is ample basis for questioning Rabbi Meiselman’s intellectual honesty and epistemology, there is no doubt that he is a highly intelligent Torah scholar. But in this section, Rabbi Meiselman appears to simply not understand what is going on in the commentaries.

Rabbi Meiselman states that the Rama and his colleagues (who attempted to explain that Chazal were not mistaken) were explaining the Gemara to the best of their abilities, but they never intended to chain Chazal’s words to their own understanding. If their grasp of science was wrong, they would prefer Chazal to be explained differently. He proceeds to state:

“What is true of the Rama is true of the many Rishonim and Acharonim who interpret this passage in terms of astronomical theories that were accepted in their day, but were subsequently rejected by science. It was never their intention that their explanations were definitely what Chazal meant. They were merely doing their best to understand an obscure piece of Gemara, using the most reliable scientific information available to them. When contemporary writers invoke these commentaries to show that Chazal’s knowledge was faulty they are making a simple error in logic. If the interpreters of Chazal held erroneous beliefs, it does not at all follow that Chazal did as well.”

It should be noted that Rabbi Meiselman provides no support whatsoever for his emphatic assertion that the Rishonim, when commented upon such sugyos, only intended their explanations to be

tentative, in contrast to their explanations of other sugyos. (Nor does he explain why this would only apply to the Rishonim's explanation of Chazal's statements about the natural world, and not to Chazal's explanations of the Torah's statements about the natural world.) And since he provides no support for it, and there is no indication for it in the words of the Rishonim themselves, there is no reason to accept it as being true.

But there is a more basic problem with Rabbi Meiselman's approach here. Put quite simply, he doesn't understand what the whole discussion is about with regard to this passage in the Talmud. True, if you're talking about the topic of spontaneous generation, you can say that the Rishonim explained Chazal in terms of their own erroneous beliefs. And if you're talking about the Rama's *defense* of Chazal's statements about cosmology, you can say that he explained them in terms of his own erroneous beliefs. But you can't say this if you're talking about the Rishonim's discussion of Chazal's statements about the sun's path at night. Here, the Rishonim do *not* "interpret this passage in terms of astronomical theories that were accepted in their day." They explain it as referring to a mistaken and obsolete view!

In other words, whereas Rabbi Meiselman says that "if the interpreters of Chazal held erroneous beliefs, it does not at all follow that Chazal did as well," he is fundamentally misunderstanding what is going on. This is not like the discussions of spontaneous generation. In this case, the interpreters of Chazal did *not* hold erroneous beliefs – they correctly believed that the sun goes on the other side of the world at night, not behind the firmament. They were stating that *Chazal* held erroneous beliefs.

#### **IV. A Failed Attempt To Render This Topic Irrelevant**

In the next section, entitled "Acknowledging the Truth," Rabbi Meiselman backpedals from his earlier misrepresentation. He starts off by admitting that "some" commentaries take the Gemara at face value, according to which Chazal acknowledged that they had erred and the truth lay with the gentiles; at the end of the section, he finally himself acknowledges the truth, that this position is held by "most Rishonim other than Rabbeinu Tam."

However, acknowledging that most Rishonim held Chazal to have been mistaken puts Rabbi Meiselman in a very awkward position, since it would refute his entire approach. And so he attempts to render this case irrelevant. He stresses – and this is the goal of this section – that "assuming that the Jewish sages actually retracted," they did so despite their utter certitude that *in general*, their wisdom was vastly superior to that of the Gentiles, due to their having derived it from the Torah. He proceeds to claim that the fact that Chazal discussed cosmology with the Gentile scholars "means that they had no precise mesorah on this particular topic," and that "nor were they able to extract the desired information from the Torah." But, he adamantly insists, in every other case, where Chazal do not inform us that they are uncertain, or when they derive their knowledge from the Torah, we can rest assured that they are correct, and "they carry the full authority of Torah shebaal Peh."

However, there are three problems with all this. First is that the fact that the Gemara records a discussion with the gentile scholars does not mean that Chazal are informing us that they are uncertain.



It just means that this was an important topic in which the gentile scholars had a very different opinion and turned out to be correct. The Gemara does not record discussions with the gentile scholars about spontaneous generation, because the gentile scholars had the same view as Chazal regarding spontaneous generation.

Second is that the error made in Pesachim is with regard to something extremely basic. Whether the sun doubles back at night to go behind a solid firmament, or continues to pass around the far side of the earth, is a very fundamental part of cosmology. (It is also taken to have substantial halachic ramifications.) If Chazal did not even know something so fundamental, and could not figure it out from the Torah even though the Torah has a lot to say about cosmology, and even though the non-Jews were able to figure it out (as Rabbi Yehudah HaNasi acknowledges), then why on earth would Chazal be authoritative in much more arcane areas of knowledge (such as zoology), in which the Torah has nothing to say and in which the gentiles were likewise unaware of the reality?

But much more problematic than both of these is that Rabbi Meiselman's premise is fundamentally flawed. Chazal *did* relate their views on cosmology to the Torah! This is not mentioned on this page in Pesachim, but it is mentioned on an earlier page in Pesachim, as well as in Bava Basra and in the Midrash. In Bava Basra, one of the Sages posits that the sun makes a 180 degree reversal in the evening, and another of the Sages states that it turns 90 degrees to the side, basing this on a passuk. In the earlier page in Pesachim and in the Midrash, Chazal talk about the thickness and substance of the firmament, basing their discussion on pesukim. (This also renders futile an earlier attempt by Rabbi Meiselman to get out of this whole problem, by suggesting that the "scholars of Israel" in Pesachim might not have been Sages.)

How did Rabbi Meiselman not know any of this? Did he fail to do basic research on this topic? Did he not read my monograph that he is attempting to rebut? In any case, it neatly destroys his excuse as to why this would be the only case in which Chazal were mistaken. Consequently, the case of the sun's path at night remains as a fundamental disproof of Rabbi Meiselman's approach regarding Chazal and science.

## **V. Conclusion**

The bottom line is that Rabbi Meiselman's discussion of this topic – the most basic topic in any Torah-science discussion – is deliberately vague, extremely confused, poorly researched, and self-contradictory. Although at the end he concedes that most Rishonim held Chazal to have erred in this matter (albeit with a flawed explanation as to why this case is unique), earlier he claims with regard to this topic that "The possibility that Chazal were in error was never an option for the Baalei HaMesorah" (p. 145). In fact, the vast majority of Rishonim, as well as countless Acharonim, held that Chazal were indeed in error – even though they based their view on the Torah. The inescapable conclusion is that Rabbi Meiselman is misrepresenting the nature of the Baalei HaMesorah.

## Anti-Rationalist Mania

In a previous post, "[Rabbi Meiselman Tries To Hide From The Sun](#)," I referred to the topic of [the sun's path at night](#) - the single most powerful proof for the legitimacy of the rationalist approach regarding Chazal and science - in which all the Rishonim, as well as many Acharonim, accept that the Gemara is recording a dispute about the sun's path at night; and the majority of Rishonim, as well as many Acharonim, accept that the Sages of Israel were incorrect. I demonstrated that when Rabbi Meiselman discusses this topic in his new book, he engages in concealment and obfuscation of the nature of the discussion and confusion of issues, and I showed that his attempt to render the topic irrelevant is flawed.

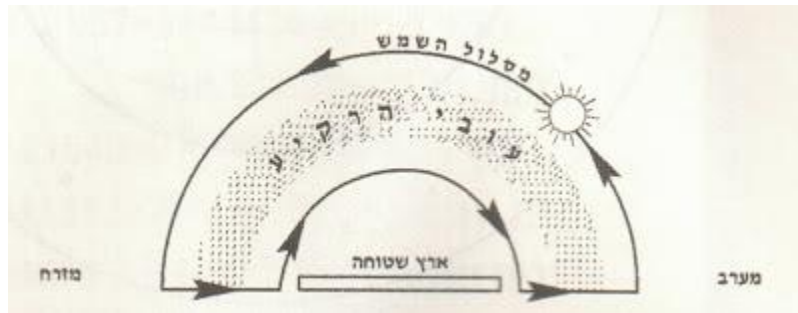
All this could not go unanswered, of course, and so in the comments to the post, some people argued back. One character, too afraid to use his real name and posting under the moniker "Observer," did not actually respond to any of my points, but repeatedly insisted that I am not remotely the Torah or science scholar that Rabbi Meiselman is, that no *talmid chacham* agrees with me, that I don't know how to learn the Rishonim, that I have no idea what the *rakia* is, that nobody cares what I say, etc., etc.

The strangest aspect of his comment is that even Rabbi Meiselman himself, at the end of all his attempts to obfuscate and mislead people in this section, is forced to admit that the Rishonim mean exactly what I say they mean! I quote: "...Chazal's self assuredness did not prevent them from admitting error when confronted with what they recognized as truth. According to most Rishonim... the passage in Pesachim is an illustration of just such an admission" (p. 148). Rabbi Meiselman attempts to argue that this is irrelevant to the larger Torah-science issue, for reasons that I have and shall further discuss, but he concedes that most Rishonim do indeed say that the Chachmei Yisrael mistakenly believed the sun to go behind the sky at night - exactly as I stated!

It's truly fascinating that in their zeal to discredit me, people will argue that I am wrong even when their heroes say exactly what I am saying!

Another response came from Rabbi Dovid Kornreich, a disciple of Rabbi Meiselman whose input is acknowledged in the book, and who is known in the blogosphere by his moniker "Freelance Kiruv Maniac." In response to my charge that Rabbi Meiselman had attempted to conceal the straightforward meaning of the Gemara, Kornreich claimed that there *is* no straightforward meaning!

Of course, this claim is nothing short of ludicrous. There indeed is a straightforward meaning. It's the literal translation of the Gemara. It's the explanation given by *Rashi*. It's the explanation given by countless Rishonim and Acharonim. It's the elucidation given by Artscroll and Soncino and Koren and Shas Lublin (Machon HaMaor), which gives the illustration shown here:



And, as noted above, even Rabbi Meiselman eventually has to acknowledge that this is the understanding of the Rishonim!

Kornreich's second claim was that the Rishonim give a host of different explanations regarding the nature of the *rakia* (firmament). However, this is entirely irrelevant. First of all, some of those were not explanations of Chazal's view of the *rakia*, but rather of these Rishonim's own understanding of the *rakia* of the Torah. Second, this is a red herring. It makes no difference what they thought the *rakia* was made out of. All that matters is that they accepted that Chazal mistakenly believed the sun to change direction at night and go behind the sky, as opposed to the correct view of the gentiles that it passes on the far side of the earth.

Kornreich attempts to argue that the Rishonim were not explaining the Gemara, just extracting the halachic relevance that the sun goes on the other side of the world at night, as per the view of the Gentiles. The problem is that if the Gentile scholars were correct about the sun going on the other side of the world at night, then the Sages of Israel were *ipso facto* saying that the sun does not go on the other side of the world at night and were incorrect. So Kornreich issues the incredible claim that the Rishonim held there to be no actual argument between the Sages of Israel and the gentiles: the Sages of Israel were talking about a metaphysical reality, whereas the gentiles were talking about the physical world. In other words, even though the Gemara phrases it as a dispute about cosmology, and R. Yehudah HaNasi chooses the opinion of the gentile scholars, there was actually no dispute about cosmology! This would be a fantastically far-fetched explanation to propose for the Gemara, but Kornreich goes even further and claims that the Rishonim held this view but made no mention of it! (And, once again, Kornreich is contradicting his own rebbe, Rabbi Meiselman, who eventually conceded that according to most Rishonim, this is an example of Chazal being in error.)

Moving to the Acharonim, Kornreich claims that that "by observing the extreme variety of their interpretations, one can tell this gemara appears to be far from straightforward." Actually, by observing the extreme variety of *some* of their interpretations, and contrasting it with the complete *lack of variety* of explanations among the Rishonim, one can reach a different conclusion: that the Gemara has a very straightforward meaning, which the Rishonim were fine with, but which many Acharonim were deeply uncomfortable with.

Kornreich argues that since R. Yehudah HaNasi agreed with the gentiles, it's not a case of saying "Chazal were wrong." But how is that at all relevant? The point is that several sages were incorrect about a basic fact of the natural world, due to their not having a divine source for this knowledge.

This brings us back to the way in which Rabbi Meiselman attempts to render this Gemara irrelevant to the rationalist approach. In the previous post, I noted why his attempt fails; there is no basis for concluding that Chazal's views on the sun's path at night were any different from their views on other aspects of the natural world. (In fact, unlike some of their statements about the natural world, Chazal related their view on the sun's path at night, and of the firmament, to *pesukim*. In cases where they did not relate their view to *pesukim*, they would be all the more ready to concede error.)

Rabbi Meiselman, followed by Kornreich, offers two sources to show that one cannot extrapolate from the sun's path at night to other cases. One is that Rabbi Yehoshua engages in a Scriptural exegesis in order to determine the gestation period of a snake. But what does this show? After all, the Sages also engaged in Scriptural exegesis in order to determine the sun's path at night. It might be different if we could show that Rabbi Yehoshua's exegesis was actually correct, but we can't even do that, forcing Rabbi Meiselman to claim that Rabbi Yehoshua was referring a particular and unknown species (which the Gemara, misleadingly, referred to with the generic term *nachash*).

Rabbi Meiselman/ Kornreich's second source is Rambam, who, when discussing Chazal's errors regarding astronomy, says that they lost the original correct Torah-based traditions in this area. For some inexplicable reason, Rabbi Meiselman (and Kornreich even more explicitly) takes this to mean that in areas where Chazal made statements about the natural world with no indication of uncertainty, these were based on the Torah and are infallible. Kornreich claims that "The exception proves the rule." No, all it proves is that Rambam believed that the Jewish People originally had correct Torah-based traditions regarding astronomy (which is particularly religiously significant, and which is hinted to in a verse about the Bnei Yissacher). It proves nothing at all about Rambam believing that they had correct Torah-based traditions in areas of the natural sciences such as zoology. On the contrary; if they lacked Torah-based knowledge for something as basic and religiously significant as where the sun goes at night, all the more so did they lack Torah-based knowledge for obscure and largely irrelevant matters such as zoology.

But, to return to the points above, what are we to make of Observer and Kornreich insisting that I am wrong, even on points in which Rabbi Meiselman eventually concedes the exact same thing? Is it that the ultimate goal is not to say that Chazal were right or even that Rabbi Meiselman is right, but rather to say that Slifkin is wrong? But surely the only drive for that is precisely because I said that Chazal and Rabbi Meiselman are wrong? How does it make sense that if I am wrong, then *ipso facto* Rabbi Meiselman is right and Chazal are right, if he's agreeing with me that Chazal were wrong? I guess people get carried away with their anti-rationalist mania.

## A Mistake In Science, Or A Mistake In Torah?

Continuing our review of Rabbi Meiselman's book, I would like to draw attention to an astonishing principle that he asserts. First, though, for the benefit of those who have not read the book and are confused about his overall approach, a few words of explanation. Rabbi Meiselman's major thesis is that "if Chazal make a definitive statement, whether regarding halachah or realia, it means that they know it to be unassailable" (p. 107). But, says Rabbi Meiselman, if they make a *tentative* statement, it could potentially be in error.

(While Rabbi Meiselman does not remotely prove his assertion that any definitive statement of Chazal about the natural world is unassailable, we will not dwell upon that for now.)

Although Rabbi Meiselman concedes that tentative statements of the Sages could be in error, he insists that we ourselves are not allowed to draw this conclusion:

"The human mind - even that of a Tanna or Amora - has limitations... Sometimes even a great scholar may err... Nevertheless, the prerogative of declaring any of their teachings mistaken is granted to *them*, not to us. For anyone other than Chazal themselves, questioning their conclusions is called being *melagleg al divrei Chachamim* - "mocking of the words of the Sages" - a crime with very serious consequences." (p. 108)

In this post, I will not deal with the difficulty of reconciling this with countless topics from the Gemara and sources from Rishonim and Acharonim that are not mentioned in Rabbi Meiselman's book. It is sufficient for now to discuss only the difficulty of reconciling this with other topics in Rabbi Meiselman's own book.

Let us first consider the case in Pesachim, where it is Rabbi Yehudah HaNasi that concedes that the gentiles are correct with regard to the sun's path at night. That would initially seem to fit well with Rabbi Meiselman's principle. But let us suppose that Rabbi Yehudah HaNasi would not have conceded to the gentiles (or let us suppose that that part of the Gemara would have been lost). According to Rabbi Meiselman, it would then have been forbidden for us to say that the sun goes on the other side of the world at night!

Rabbi Meiselman does not even seem to observe his own methodology with other cases that he discusses later in the book. For example, with regard to the mouse that is generated from dirt, Rabbi Meiselman says that Chazal were not definitively stating that it exists, only tentatively exploring the possibility. It is therefore, he says, not problematic to point out that there is no such creature. But Chazal never said that Chazal were wrong! Isn't he contravening his own methodology, quoted above? Is he not being *melagleg al divrei Chachamim* by his own definition?

Things get even more strange and problematic when we read more about Rabbi Meiselman's approach regarding cases where Chazal were speaking tentatively and were in error:

"...Whether Chazal were speaking definitively or tentatively, they were *never* - in the opinion of these authorities - merely presenting contemporary science (note - in a footnote, he says that

practical medicine may be an exception). They were presenting insights about reality derived from the Torah... Consequently, even when a tentative statement of Chazal is in error, it is not an error in science but an error in the interpretation of the Torah." (pp. 107-8)

This is remarkable! Remember how the Gedolim came crashing down upon me for saying that Chazal made errors in science, due to their following the scientists of their era? Isn't it much, much worse to say that Chazal were actually making errors in Torah rather than in science?!

Furthermore, how can this be reconciled with what Rabbi Meiselman writes elsewhere in the book? The most obvious example of Rabbi Meiselman's principle is the case in Pesachim. So, Rabbi Meiselman is telling us, the Sages who believed that the sun goes behind the sky at night were *not* following the contemporary Babylonian cosmology; instead, they were solely, albeit tentatively, deriving their position from the Torah. It is extremely difficult to reconcile this with what Rabbi Meiselman writes in the chapter about Pesachim, where he is arguing that the Sages of Israel were wrong precisely because they could *not* obtain their knowledge from the Torah (and to which I responded that elsewhere in the Gemara, we see that they did relate their cosmological view to Scriptural exegesis).

Those of us who follow the rationalist Rishonim and Acharonim, and who do not subscribe to Rabbi Meiselman's assertion that only Chazal can point to errors in Chazal's statements, will observe a remarkable phenomenon. There are numerous cases where Chazal's statements about the natural world are incorrect, whether they are referring to salamanders spontaneously generating from fire, seven-month fetuses being more viable than eight-month fetuses, the kidneys providing counsel, [hyenas changing gender](#), etc. According to Rabbi Meiselman, we are not allowed to declare any of these to be mistaken; and even if they were mistaken, they were mistakes in the Sages' interpretation of Torah - they were not presentations of the mistaken science of their era and had no connection to it. But where does the Torah speak about salamanders coming from fire or hyenas changing gender? And isn't it an *extraordinary* coincidence that those insights which turn out to be in error are so often *identical* to the errors made by non-Jewish scientists of that era?

## Omitting Inconvenient Sources

Should a book mention sources that are opposed to its thesis? That depends on what kind of book it is. If it just seeks to present a certain view, and makes no claim regarding the existence of other views, then it doesn't need to mention those opposing views. But certainly if a book is attempting to be any kind of definitive guide to the range of legitimate views, and there are views that are ostensibly legitimate and yet are outside of the range permitted by the book, then it should mention them, and account for them.

In the preface to Rabbi Moshe Meiselman's book, [Torah, Chazal and Science](#), he writes as follows:

"I have not attempted to make this work encyclopedic. Many sources confirming the positions I have taken on major issues have been omitted in order not to overburden the reader. On the other hand,

there may be other sources contradicting some of the theses of this book that have also been left out. What I have attempted to do is to quote those sources that reflect what I believe is the mainstream of traditional scholarly opinion on the topics discussed.” (p. xxiv)

I consider this paragraph to be deceptive in the extreme. It purports to justify the omission of sources that “may” contradict “some of” his theses. But there is no justification for his omission of sources that *do* contradict his *fundamental* thesis, as I shall now explain.

Rabbi Meiselman’s book is a whopping *eight hundred* pages long. The description on the inside flap notes that “Thousands of references, including a vast amount of primary source material, make this an invaluable resource for anyone interested in investigating the issues on his own.” The constant theme of the book is that Chazal’s definitive teachings about the natural world are *never* in question, and the *chachmei haMesorah* have *never* said otherwise (see e.g. p. 261). The goal of the work, as discussed on p. xxii (and explicitly described there as *the* goal of the work), is to show that “there is no support in the classical sources” for the approach to Chazal and science that is presented in books such as mine. In other words, he does *not* just want to show what is the “mainstream” approach, as he claims in the paragraph above; instead, he wants to *entirely negate* the legitimacy of the approach that is presented in my books.

(Note too that he does not describe his goal as presenting the correct approach, but rather as showing that the approach given in my books is wrong and has no support. His focus and emphasis is on negating the approach of others, rather than on presenting his own approach.)

But given that he writes a vast amount of material, and presents *thousands* of references, and especially given the fact that his goal is *specifically* to address and rebut the approach of my books, and to claim that it has *no* support amongst the *chachmei hamesorah*, it is all the more remarkable that Rabbi Meiselman does not acknowledge the existence of several of my most important sources!

- Most of the Rishonim, and many Acharonim, are of the view that Chazal were mistaken with regard to the sun’s path at night. [As demonstrated in an earlier post](#), Rabbi Meiselman tries to downplay the views of the Rishonim, refusing to quote or explain their position on this topic. And he does not acknowledge the existence of various Rishonim and Acharonim, such as [disciples of Chasam Sofer](#), who, in commenting on this topic, make general statements about how Chazal were simply not expert in scientific matters and thus sometimes erred.

- Rav Shimshon Raphael Hirsch is one of the most important Jewish figures of the nineteenth century. His letters on Chazal and science are the most extensive pre-20th century discussion of the topic. He occupies a prominent position in the manifesto of the approach that Rabbi Meiselman is attempting to refute. He discusses at length the case of the mouse that Chazal describe as growing from dirt, which Rabbi Meiselman has a chapter on. But Rabbi Meiselman makes no mention of Rav Hirsch’s writings on this topic! And he quotes Rav Hirsch’s skepticism of evolution from a scientific standpoint, without quoting his statement that evolution presents no theological problem!

- The topic of spontaneous generation is one of the most significant in the Chazal-science discussion, and Rabbi Meiselman has a full chapter on it. Rav Moshe Shmuel Glasner, Chief Rabbi of Klausenberg and the author of the seminal work *Dor Rev'i*, is one of only three pre-Holocaust gedolim [to address](#) this conflict; it also addressed by Rav Herzog, who is quoted elsewhere in Rabbi Meiselman's book and is thus an authority that he takes seriously. But Rabbi Meiselman makes no mention of the view of Rav Glasner and Rav Herzog regarding the spontaneous generation of lice!

(And it's not as though these sources are massively outnumbered by countless sources that Rabbi Meiselman has in support of his approach. In fact, with regard to the cases of the mice and lice discussed above, Rabbi Meiselman [claims that all the Rishonim and Acharonim are wrong](#), and he does not have even a *single* authority who presents his view!)

There are further examples of how Rabbi Meiselman omits inconvenient sources. I shall discuss them in the course of future posts.

My book *Sacred Monsters* is only half the length of Rabbi Meiselman's book, and much of it is not dealing with conflicts between Chazal and science. Yet I manage to quote the full range of views on this topic; it's really not too difficult. All it takes is the honesty and humility to acknowledge that there have been great people in history who take a different view from one's own. It is a pity that Rabbi Meiselman cannot do this.

## When Is A Mesorah Not A Mesorah?

As the field of Torah/science changes, due to increased scientific knowledge and increased awareness of classical Jewish sources, the rationalist approach gains steam. The response from anti-rationalists also evolves. Never underestimate people's creativity! Nine years ago, we saw the innovation that opinions of Rambam, Rav Hirsch and so on can be "paskened" to be a heretical perversion of theology. Now, with the new assault on the rationalist approach by Rabbi Moshe Meiselman and his protege Dovid Kornreich, there's another novel stratagem.

The new stratagem is a method for [wholesale dismissal](#) of Rishonim who give inconvenient explanations, while simultaneously [condemning](#) those who dispute certain other explanations of Rishonim for the crime of "attacking the mesorah." The attempted justification for this contradictory approach is the claim that the Rishonim intended certain explanations "tentatively," while other explanations were given definitively. But of course, there is no *a priori* method given for determining which is which; rather, the determination is made based upon which approach gives the desired result.

Rabbi Meiselman discards the views of *all* the Rishonim and Acharonim regarding the meaning of the Gemara's statement that lice are not *parin v'ravin*. He is also willing to dismiss their views regarding the



meaning of the Gemara's statements about astronomy, and its statements about the mouse that grows from dirt. He attempts to justify such large-scale dismissal of Rishonim by saying that "It was never their intention that their explanations were definitely what Chazal meant. They were merely doing their best to understand an obscure piece of Gemara, using the most reliable scientific information available to them" (p. 146).

Now, what is the basis for such a claim? Rabbi Meiselman argues that "they certainly never intended to chain Chazal's words to their understanding, so that if they should be proven wrong, Chazal's teachings would fall along with them. On the contrary, they would have been the first to say that their interpretations were evidently incorrect."

But is this true? In the case of astronomy, [I demonstrated](#) that it is certainly not true. There, the Rishonim do *not* "interpret this passage in terms of astronomical theories that were accepted in their day." They explain it as referring to a mistaken and obsolete view!

But what about in the case of lice? Would the Rishonim have changed their explanation of Chazal's words had they known that lice do not spontaneously generate? The simple truth is that it is impossible to know. My feeling is that some would have changed their explanation, and some would not. Yet in any case, it's irrelevant. As long as they did not know that spontaneous generation was an impossibility, they believed that their explanations were correct. They did not indicate in any way that they were only tentatively suggesting these explanations.

Furthermore, one point is beyond dispute. It is abundantly clear that had the Rishonim been confronted with evidence that their explanations of certain *Scriptural* stories were wrong, they would certainly have retracted their explanations. Yet this is a case where Rabbi Meiselman takes their explanations as being definitive and beyond dispute!

Turning to Rabbi Meiselman's protege Kornreich in the latest issue of Dialogue, the contradictions and unreasonability of the approach become even more pronounced. Kornreich concedes that the Rishonim of Europe, aside from being mistaken about spontaneous generation, human anatomy, astronomy and so on, also made certain errors due to their geographical removal from the world of Torah and Chazal. Thus, he admits that their understanding of the geography of Eretz Yisrael contains inaccuracies. However, he insists that when it comes to identifying flora and fauna, it is unthinkable to say that the Rishonim of Europe erred. This, he argues, is a "fundamental part of our mesorah," because it relates to halachic definitions and terms. Accusing them of "wittingly or unwittingly" being in error "impugns the integrity" of their character and "undermines our belief in the accuracy of that mesorah." Thus, it is unacceptable to say that the Rishonim of Europe, due to geographical limitations, erred in their halachic identification of *maror*, *shibbole* *shual*, the *kezayis*, the *tzvi* or the *shafan*.

The problem with this distinction is that, aside from being completely invented out of thin air, it is very clearly contradicted by the sources. First, as I pointed out above, the Rishonim gave what they viewed as correct explanations of spontaneous generation, and human anatomy, which definitely have halachic

ramifications, and yet Kornreich dismisses all their views on this topic. Second, many authorities have clearly stated that the European Rishonim erred in these identifications due to geographical limitations.

With [maror](#), I am told that the Roshei Yeshivah of RIETS, including Rav Schachter and Rav Willig, will not make the *berachah* of *al achilas maror* on horseradish. They recognize that Europeans only legitimized the use of horseradish because they had no access to leafy vegetables. And there are several cases where prominent early Rishonim discounted the views of European Rishonim on halachic matters due to their geographical limitations. We have noted [previously](#) that Radvaz negates the view of R. Eliyahu Mizrahi (and effectively many others) who identified the "River of Egypt," stated to be the border of Eretz Yisrael, as the river Nile, pointing out that they were unfamiliar with the geographical reality, due to their living in Europe. Ramban [negates](#) Rashi's view regarding one of the ingredients of the *ketores*. Rav Yosef Karo [negates](#) the Tur's view regarding which *berachah* to make on sugar, on the grounds that the Tur was not from a place where sugar grows and was unfamiliar with the nature of it.

The *tzvi* provides a potent example of how Kornreich's approach is without basis. In my letter to Dialogue, I wrote that "Europe has very different animals from those of Eretz Yisrael, and the names of animals in Tanach were transposed to local equivalents. For example, the gazelle of Israel perfectly matches all Scriptural, Talmudic and Midrashic descriptions of the *tzvi*. While Jews in north Africa, which also has gazelles, had a (correct) tradition that the *tzvi* is the gazelle (and that the deer is the *ayal*), there were no gazelles in Europe. As a result, the name *tzvi* in Europe was transposed to the deer (hirsch). This led Rashi, in his commentary to Chullin 59b, to note that the creature traditionally called *tzvi* in Europe (i.e. the deer) is not the *tzvi* described by Chazal. Thus, Rashi himself observes that European traditions regarding the identities of animals mentioned in the Torah are not accurate."

Kornreich attempts to discount this by creating an artificial distinction between different classes of animal identification. He claims that "the translation of *tzvi* as a deer was never an halachic one employed by the Gedolei Torah of Rashi's time, but merely one used in the vernacular." According to Kornreich, Rashi's very point is that the *tzvi* only means deer in the vernacular, and this was never a halachic mesorah. However, if you take a look at Rashi's words, that is not at all what he was saying - he was genuinely troubled by the deer not matching the Talmudic accounts of the *tzvi*. Furthermore, Kornreich has not studied the topic - Tosafos maintains that the *tzvi* is indeed the deer, and engages in a textual emendation of the halachic criteria given in the Gemara in order to make it fit! Clearly, the translation of *tzvi* as a deer was indeed an halachic one employed by the Gedolei Toyrah of Rashi's time.

Kornreich argues that the Rishonim must have known that the animal and plant life of Europe differs from that of Eretz Yisrael, and they would thus not have given their identifications unless they were certain that their geographic distance was irrelevant. But this is simply a naive retroactive projection upon the Rishonim. It's certainly not "impugning the integrity of their character," as Kornreich charges, to say that they did not realize that the animal life of Israel is very different from that of Europe. I find that even people today generally don't realize that the animal and plant life of Israel is fundamentally different from that of Europe and North America. When it comes to rabbinic approaches to zoology - the topic of my doctoral dissertation - Kornreich is simply completely out of his depth. In my extensive

studies of the history of rabbinic and non-rabbinic attempts to identify the flora and fauna of Scripture, it is clear that it was only in the last two centuries that people began to become adequately sensitive to geographical differences in animal distribution. Furthermore, if you look at the tremendous difference between the definitions of kosher and non-kosher animals, birds and insects (a topic with halachic ramifications) given by European Rishonim, and those given by Rav Saadiah Gaon and other authorities from the region of Israel, it's obvious that this is due to each interpreting them in terms of animal life with which they were familiar.

**In conclusion:** this stratagem of [wholesale dismissal](#) of Rishonim who give inconvenient explanations, while simultaneously [condemning](#) those who dispute certain other explanations of Rishonim for the crime of "attacking the mesorah," is hopelessly illogical, contrary to the sources, and self-contradictory. But alas, I suspect that the result of my pointing this out will not result in a retraction of this approach. Instead, it will result in even creative and intellectually dishonest attempts to come up with hair-splitting differences to enable the wholesale dismissal of Rishonim that they don't like, while condemning those who do not follow the Rishonim that they do like.

## The Limits of Science

This is going to be a bizarre post. I find myself in the unusual position of arguing that science does *not* conclusively prove something, while my ideological opponents on the Right act as if it does indeed conclusively prove something!

"Spontaneous generation" is the ancient belief that various insects, as well as certain creatures such as mice, arise from inanimate matter rather than from parents. It is sometimes said that science has "disproved" spontaneous generation. But this is an error. Science cannot "disprove" spontaneous generation. It can say that we do not observe it to happen. But it cannot *prove* that it never happens.

It is therefore odd, and hypocritical, that Rabbi Moshe Meiselman, in his book [Torah, Chazal and Science](#), argues that spontaneous generation has been disproved, and therefore insists that Chazal never referred to such a phenomenon, and that [all the Rishonim and Acharonim](#) misinterpreted Chazal (see pp. 319-320). True, on pp. 598-9, when discussing spontaneous generation in the context of challenging evolution, Rabbi Meiselman admits in a footnote that "proving a negative is virtually impossible." But this only highlights even more strongly the inconsistency of his approach. When justifying his novel approach to Chazal regarding lice, on p. 305, Rabbi Meiselman claims that this is justified due to the presence of "observable facts," rather than mere "theories." But there are no "observable facts" that lice in the era of Chazal did not spontaneously generate!

Why are many of us absolutely confident that animals never spontaneously generated, even in Chazal's time? It is based on a combination of three factors:

- 1) We never observe spontaneous generation to take place;
- 2) There is no mechanism to explain such a phenomenon, i.e. it goes against everything that we know about biology;
- 3) The testimony in favor of spontaneous generation lacks credibility.

While I have all these factors present to enable me to reject spontaneous generation (but not to deny that Chazal believed in it), these factors do not all exist for Rabbi Meiselman. Rabbi Meiselman can agree with the first factor, that we never observe spontaneous generation to take place. But to reject it on the grounds that it goes against biological theory would run counter to his entire approach. After all, he freely discounts science regarding everything that it says about the universe before 5773 years ago. He is of the view that scientists have no idea what they are talking about when they speak of stars being millions of light-years away. He is of the view that *nishtaneh hateva* can be freely applied, and thus the Gemara is completely accurate in saying that the wolf, lion, bear and monkey have a gestation period of three years, even though biologists would dismiss such a notion out of hand. Most significantly, he also appears to accept that salamanders are generated from fire, about which I shall write more on another occasion. When he so freely says that scientists have no idea what they are talking about, even with regard to the impossibility of salamanders coming from fire, on what grounds does he suddenly accept their approach in this area?

With regard to the third factor, that the testimony in favor of spontaneous generation lacks credibility, Rabbi Meiselman would also have to disagree. After all, in the prologue to his book, Rabbi Meiselman writes about how the Rishonim were on a much higher level of understanding than us, that they were "incalculably wiser and more attuned to the sources," etc. If they said that Chazal were referring to spontaneous generation, and they further claimed that spontaneous generation occurs, then surely, following Rabbi Meiselman's declarations, that is of tremendous authority.

Indeed, Rav Yehudah Briel, when asked by Rav Yitzchok Lampronti about the position of scientists that there is no such thing as spontaneous generation, simply rejects science out of hand. It should be noted that Rabbi Meiselman himself cites Rav Briel earlier in his book, when he wants to speak in broad terms about the proper methodological approach to these issues. So why does he ignore Rav Briel when it comes to the chapter discussing the topic that Rav Briel was actually speaking about? Let us paraphrase Rabbi Meiselman's disciple Dovid Korneich [in a statement](#) originally made about the antiquity of the universe: "The scientific evidence that spontaneous generation does not occur in lice is only "strong" when you accept the assumptions of science regarding lice reproduction. From the perspective of our Jewish tradition, those assumptions are simply nullified by what is written in the Gemara and Rishonim and are left without basis."

On the basis of his own methodology, Rabbi Meiselman does *not* have license to discard the plain meaning of Chazal's words and the universal mesorah from the Rishonim and Acharonim. When making strong statements about his methodology, Rabbi Meiselman is emphatic: "With respect to all teachings that are part of our Mesorah we do not engage in reinterpretation to accommodate new theories, but only observable facts" (p. 263). And further: "It seems clear that even strong scientific argumentation -

whether based upon theoretical considerations, or observation and experimentation - would not be sufficient" (p. 264).

But, contrary to Rabbi Meiselman's claim that there are "observable facts" in the case of spontaneous generation, there are *no* observable facts that lice did not spontaneously generate in Chazal's day. There are only theoretical considerations, to which Rabbi Meiselman assigns little credibility. Conversely, there are the words of the Rishonim and Acharonim, to which Rabbi Meiselman attaches great authority. He should therefore be consistent and follow the approach of the charedi world, which is to say that Chazal were referring to a type of louse that did indeed spontaneously generate, but which is now extinct (or *nishtaneh hateva*). Rabbi Meiselman is not only going against the universal mesorah and taking an approach which Rav Elya Ber Wachtfogel [has declared](#) to be heretical. He is also being hypocritical.

## Metzitzah and the Rav

*Metitzah* - the suction of blood from the circumcision - is prescribed by the Gemara as a medical necessity. Today, however, medical opinion states that not only is it not of medical benefit, it is actually potentially harmful, when done in the traditional manner of using oral suction. What, then, are we to do?

According to Rabbi Moshe Meiselman, in *Torah, Chazal and Science*, whenever Chazal make a statement about realia, and do not indicate that they are speaking tentatively, then they are correct, and to doubt them is heresy. Rabbi Meiselman thus states, with regard to *metzitzah* (pp. 239-40), that "Chazal's assessment overrides that of modern medicine," because "Chazal understood the situation better than the physicians." He stresses that "we rely upon their judgment unswervingly, even if medical opinion says otherwise."

Following from this, Rabbi Meiselman states that "the *mohel* must suction the wound in a traditionally prescribed manner." Now, this could only mean that the *mohel* must suction the wound with his mouth. It is exceedingly strange, though, that Rabbi Meiselman avoids using the word "mouth" in this entire discussion. What is the reason for this? I'm not sure. Perhaps it is politically inexpedient for him to explicitly insist on *metitzah b'peh*, in the light of all the scandal revolving around the infant illness that it has caused. Perhaps Rabbi Meiselman is trying to leave himself wiggle room to claim that he is not insisting on *metitzah b'peh* but only on *metzizah*. But his meaning is clear. First, there is the context of the entire discussion - the entire controversy revolves around doing it with the mouth. Second, every reader will assume and understand that this is the intent - if he did *not* mean *metzitzah b'peh*, he would have to say so. Third, the phrase "traditionally prescribed manner" does not leave any room for doubt regarding his intentions.

In any case, while Rabbi Meiselman's views on this topic will be anathema to those who accept contemporary medical science and reject his extreme view regarding Chazal's authority, at least it is

consistent with his overall approach. One cannot fault him for inconsistency.

Except that one can.

Dr. [Shlomo Sprecher](#) pointed out to me that Rabbi Meiselman is in fact revealing a fundamental problem here. Throughout the book, Rabbi Meiselman makes reference to "*mori v'rebbi*," his uncle and alleged mentor Rav Yosef B. Soloveitchik. A review of the book that appears in The Jewish Press claims that Rabbi Meiselman "had unlimited access to his uncle and rebbe, Rav Yosef Dov HaLevi Soloveitchik, zt"l, who guided him in attaining a profound, thorough and Torah-true perspective on this topic." But Rav Soloveitchik had a very different approach to *metzitzah b'peh*.

Rabbi Gil Student [reports](#) that "the following was written by R. Hershel Schachter in *Nefesh Ha-Rav* (p. 243) about R. Joseph B. Soloveitchik's position on this matter, and was confirmed by R. Fabian Schoenfeld as having happened at his son's circumcision:"

Our teacher's view was that nowadays there is no need for *metzitzah* at all, like the *Tiferes Yisrael*'s view in the Mishnah [sic!] (see the *Sedei Hemed* for a long treatment of this). He told us how a *mohel* once wanted to perform *metzitzah be-feh* and **our teacher asked him not to**. When the *mohel* refused, our teacher told him that if his father, R. Moshe Soloveitchik, were there, he would definitely not have allowed him to perform *metzitzah be-feh*. However, I am more tolerant and since you are refusing, I will let you.

Rav Soloveitchik's view was also included in the [statement](#) made by the RCA:

The poskim consulted by the RCA (Rabbi Gedalia Dov Schwartz, Av Beit Din of the Beth Din of America and of the Chicago Rabbinical Council; Rabbi Hershel Schachter of RIETS/YU and the Union of Orthodox Congregations of America; and Rabbi Mordechai Willig of RIETS/YU and Segan Av Beit Din of the Beth Din of America) agree that the normative halacha undoubtedly permits the third view, and that it is proper for mohalim to conduct themselves in this way given the health issues involved in the fourth view. Rabbi Schachter even reports that Rav Yosef Dov Soloveitchik reports that his father, Rav Moshe Soloveitchik, would not permit a mohel to perform metzitza be'peh with direct oral contact, and that his grandfather, Rav Chaim Soloveitchik, instructed mohelim in Brisk not to do metzitza be'peh with direct oral contact. However, although Rav Yosef Dov Soloveitchik also generally prohibited metzitza be'peh with direct oral contact, he did not ban it by those who insisted upon it, and neither does the RCA advocate any such ban.

Rabbi Meiselman does not follow his rebbe's view regarding *metzitzah b'peh*. Worse, he does not even mention it. But even more significantly, Rav Soloveitchik's views on *metzitzah b'peh* show that he had a very different approach to Chazal's scientific knowledge than does Rabbi Meiselman.

## Metzizah and the Rav Part II

In a post last week entitled [Metzitzah and the Rav](#), I argued that Rabbi Meiselman, in insisting that "the mohel must suction the wound in a traditionally prescribed manner," was neglecting to mention the position of his alleged mentor, Rav Yosef B. Soloveitchik, who was against *metzitzah b'peh*. Various defendants of R. Meiselman claimed in response that R. Meiselman was not referring to metzitzah b'peh, but just to metzitzah by any form, including using a tube as was often done in Lithuania.

Now, if this is true, it would provide another example of R. Meiselman being exceedingly disingenuous. If a person means to state that metzitzah must be done whether by mouth or by tube, there are plenty of ways to say this clearly, such as by saying that "the mohel must suction the wound by whatever means." Saying "in a traditionally prescribed manner" clearly leads people to believe that he is referring to metzitzah b'peh. After all, if he is referring to using a tube, then what is the *non*-traditionally prescribed manner?!

But it would not only be an example of disingenuous writing. It would also *still* be conflicting with the position of his alleged rebbe.

In a post at [the Seforim Blog](#), Dr. Marc Shapiro noted that Rav Schachter wrote a footnote in the second edition recording the view of one of the Rav's talmidim that the Rav was not opposed to metzitzah per se, just to metzitzah b'peh. Someone sent me the following comment:

I spoke to Rav Schachter after I read Marc Shapiro's post and he insisted that Rav Soloveitchik did not require metzitzah at all (he mentioned the Sdei Chemed to me when I asked him how Rav Soloveitchik could say such a thing). When I mentioned Marc Shapiro's post to him, he said one or two of the Rav's talmidim in Israel insisted that the Rav never said metzitzah is unnecessary, so Rav Schachter added a footnote to this effect in the next edition of Nefesh Harav. However, Rav Schachter in his conversation with me was insistent that the Rav, indeed, did not require metzitzah at all.

Another person wrote as follows:

I am not into writing reactions (Israelis call them "talkbacks") on blogs, since I have not become accustomed to the 21st Century. But I want to give you a bit of information that is relevant to your discussion of Metzitzah. I attended Rav Aharon Lichtenstein's shiurim at Gruss for a number of years, and I clearly remember what he said on the subject during what the guys called "a press conference." He said very clearly that the Rav was against any Metzitzah at all, and he expressed this view explicitly at the brit of one of Rav Aharon's sons. To me such a view makes lots of sense, if one understands that it is required in the gemara only because it was then thought that the lack of Metzitzah was dangerous. (שבת קלג, ב.) כי לא עבד סכנה הוא

And, following this comment, another person wrote to me (unfortunately, he will not let me quote him by name):



I was at the same shiur (= "press conference") of Rav Aharon and he explicitly said that "the Rov" held that no *metzitza* should be done ***at all***. At the birth of one of Rav Aharon's sons, the Rov was watching "like a hawk" lest the mohel do it.

So, we have the emphatic testimony of two of the Rav's leading talmidim, one of whom is also his son-in-law, that the Rav was against any form of metzitzah, whether by the traditionally prescribed manner of oral suction, or the non-traditional manner of using a tube. (And they have much less incentive to fabricate this position than those claiming that the Rav did insist on metzitzah.) Thus, if Rabbi Meiselman was referring to metzitzah via a tube, he is not only being disingenuous in his writing; he is still demonstrating that his approach to Torah and science is fundamentally at odds with his alleged rebbe.

## Mouse Torture

Is there such a thing as a mouse that grows from dirt? The Mishnah discusses the halachos of such a creature, and the Gemara presents it as a way to convince someone of the viability of the resurrection of the dead. (See the full discussion in my book *Sacred Monsters*.) Due to Chazal's attestations, the Rishonim and Acharonim insisted that such a creature existed. Rav Samson Raphael Hirsch, on the other hand, said as follows:

The greatness of (a scholar's) wisdom is in no way belittled if in a later generation it is discovered that some of the things he maintained or accepted on the authority of others are unreliable. The same is true for Chazal in these areas... Imagine if a scholar such as Humboldt had lived in their times and had traveled to the ends of the world for his biological investigations. If upon his return he would report that in some distant land there is a humanoid creature growing from the ground or that he had found mice that had been generated from the soil and had in fact seen a mouse that was half earth and half flesh and his report was accepted by the world as true, wouldn't we expect the Sages to discuss the Torah aspects that apply to these instances? What laws of defilement and decontamination apply to these creatures? Or would we expect them to go on long journeys to find out whether what the world has accepted is really true? And if, as we see things today, these instances are considered fiction, can the Sages be blamed for ideas that were accepted by the naturalists of their times? And this is what really happened. These statements are to be found in the works of Pliny, who lived in Rome at the time the Second Temple was destroyed, and who collected in his books on nature all that was well known and accepted in his day.

There is no such creature as a mouse that grows from dirt. But it is perfectly reasonable for Chazal to have believed in such a creature, just as people today believe in duck-billed platypuses and other creatures that they have never seen.

Rabbi Moshe Meiselman, however, in his book [\*Torah, Chazal and Science\*](#), has a different take on the matter.



You see, Rabbi Meiselman is caught in a difficult situation. On the one hand, he insists, as a matter of dogma, that whenever Chazal make a definitive statement about the natural world, it must be true, and to say otherwise is heresy. On the other hand, he believes that science has proven that spontaneous generation never occurs (though his basis for this [is very unclear](#), due to his free dismissal of science in other areas). So, in this case, he is forced to making the astonishing claim that Chazal themselves never actually believed in the existence of the mud-mouse!

What of the Mishnah discussing its halachos? Rabbi Meiselman claims that Chazal were "merely familiar with the persistent rumors" about the mud-mouse, and wished to clarify its halachic status. But "they made no definitive statement" that this creature exists. That's true; still, it is most reasonable to say that Chazal presumed that such a creature did indeed exist. The Rishonim and Acharonim, based on this Mishnah and the discussions in the Gemara, understood that Chazal were attesting to the existence of such a creature. But Rabbi Meiselman, [as is his style](#), claims that the "accepted understanding" (i.e. *mesorah*) regarding this Gemara is wrong.

But what about the Gemara, in which Rabbi Ami tells a heretic, who does not believe in the viability of the resurrection of the dead, to "Go out to the valley and see the mud-mouse"? Amazingly, Rabbi Meiselman still insists that Rabbi Ami was making no attestation as the existence of the mud-mouse. Instead, he was saying "Since *you* believe that mice grow from dirt, why shouldn't you believe in *techiyas hameisim*." Notwithstanding the fact that Chazal often consciously rebuffed heretics with weak arguments, or according to their own, mistaken understanding of pesukim, it is extraordinarily unreasonable to explain this case in such a way - Rabbi Ami actually told him to *go and see it*! Furthermore, Rabbi Ami precedes and follows his mouse-argument with other scientific arguments that are based on actual realities. Yet Rabbi Meiselman presents his explanation, which goes against the plain meaning of the words, the surrounding context, and the traditional understanding, as the "likely" explanation of the Gemara!

But there is an even more blatant proof that Chazal believed in the existence of the mud-mouse. It's from the third source in Chazal discussing this creature - and it's a source that Rabbi Meiselman *entirely neglects to mention*. The Gemara and Midrash explain that an exegesis from a Scriptural verse is used to deduce that such a creature transmits spiritual impurity:

"I might think that a swarming creature causes impurity, but a mouse that is half flesh and half earth, which does not reproduce, does not cause impurity. But it is logical: The rat causes impurity and the mouse causes impurity; just as "rat" is as its meaning, so too "mouse" is as its meaning (and thus a mouse that is half flesh and half earth would transmit impurity). Yet alternatively, one could say, just as the rat procreates, so too the mouse referred to is one that procreates, which excludes a mouse that is half flesh and half earth and does not procreate! Therefore it teaches us, "[And this is impure for you] amongst the swarming creatures (*basheretz*) [which swarms on the land]" —to include the mouse that is half flesh and half earth,

that one who touches the flesh becomes impure and if he touches the earth he remains pure."  
(Midrash Sifra, parashas Shemini 5:6; Talmud, Chullin 127a)

Chazal actually had a *derashah* from the Torah *specifically* for the mud-mouse! Now, while some people are comfortable in saying that Chazal's *drashos* were their own inventions, and could have a mistaken basis, I'm pretty sure that Rabbi Meiselman does not fall into that category. Furthermore, in the prologue to the book, Rabbi Meiselman [insists](#) that even in cases where Chazal make mistakes in Torah, we do not have the right to point it out. It's no wonder that Rabbi Meiselman omitted this Gemara from his chapter on the earth-mouse - there's no way that he can quote it and maintain his approach.

(As an aside, the Gemara in Chullin, which presents the mud-mouse as an opposite case to *para v'rava*, shows that "*ain para v'rava*" with regard to lice refers to spontaneous generation, in contrast to the strained apologetics of Dr Betech and Rabbi Meiselman.")

It is ironic that at the end of the chapter, Rabbi Meiselman has some weasel words about how he "makes no claim" that his approach is "definitely the correct one" and the correct approach "may be different altogether." He's made it clear that spontaneous generation of mice does not happen, and he's made it clear that to believe that Chazal made a false attestation is heresy. So which different approach is he allowing room for?

What of Rav Hirsch? Well, [as noted in an earlier post](#), despite Rabbi Meiselman's presentation of his book as a definitive guide to Torah and science, and Rav Hirsch's essay being the most substantial pre-20th century treatment of this topic, Rabbi Meiselman omits any mention of Rav Hirsch's essay. Presumably this is because, according to the dogmas that Rabbi Meiselman sets down and claims to be based on tradition, Rav Hirsch's essay is heresy.

Chazal discussed the halachos of the mud-mouse. They had a specific *drashah* from the Torah to refer to the mud-mouse. They told heretics to go and look at the mud-mouse. It's unreasonable in the extreme to claim that Chazal were not convinced that such a creature exists. Yet this is what Rabbi Meiselman insists upon. And he further insists that if you agree with him that there is no such thing as spontaneous generation, then you are committing heresy if you accept the view of all the Rishonim and Acharonim who disagree with his understanding of the Gemara, and who explain that Chazal were indeed attesting to such a creature!

Perhaps even more disturbing is how in order to try to pull this off, Rabbi Meiselman omits any mention of the crucial Gemara about a *derashah* for the mud-mouse. Even more ironically, in the conclusion of the book (p. 673), where Rabbi Meiselman repeats why only a person such as himself is qualified to write on these topics, he says that it must be dealt with by "sincere and qualified scholars, interested only in truth." Is omitting crucial Gemaras and prominent Acharonim, not to mention bending over backwards and engaging in tortuous apologetics to avoid the straightforward meaning of the Gemara that was accepted by all the Rishonim and Acharonim, the sign of a sincere and qualified scholar who is interested only in truth?!

## A Recipe for Intellectual Dishonesty

The label "intellectual dishonesty" is often bandied about, but is not so easy to define, or to differentiate from general dishonesty. It seems that the term should be used for cases when a person presents an intellectual argument that falls far short of the standards that the person himself should know to use. He may sincerely believe the argument that he is offering, and thus he is being honest; but he is intellectually dishonest in not applying the evaluation that he should know to apply.

For example, someone who insists that "expert opinion" maintains that the world is less than six thousand years old, and that there was no age of dinosaurs, is not necessarily intellectually dishonest. He may genuinely believe that to be the case, if his definition of "expert opinion" is consistent.

There are numerous examples of intellectual dishonesty in Rabbi Moshe Meiselman's book [\*Torah, Chazal and Science\*](#). But one stands out in that it is an actual *recipe* for intellectual dishonesty.

It's very unfashionable in Orthodox Judaism to talk about anyone being infallible - after all, that reeks of idolatry. Staunch advocates of Daas Torah, for example, will insist that they do not believe that the Gedolim are infallible. However, they undermine this claim when they refuse to name any instance of the Gedolim ever being mistaken.

Rabbi Meiselman likewise insists that Chazal were not omniscient or infallible (p. 33). However, he undermines this claim in two ways. First is that he distinguishes between cases where Chazal make definitive statements and when they make tentative statements. In cases where they make firm statements, Rabbi Meiselman claims that is inconceivable that they would have done so unless they were certain that they were correct and that there was no possibility of their being in error. As he states: "A major thesis of this book is that if Chazal make a definitive statement, whether regarding halachah or realia, it means that they know it to be unassailable" (p. 107). His given reason for this is that "Whenever Chazal make unqualified statements it indicates that regarding those particular issues the information encoded in the Torah or the methodology for extracting it had not yet been lost. Therefore, their knowledge represents absolute truth, which overrides any manmade theory" (p. 32-33).

Now, there are a number of problems with this claim. Rabbi Meiselman claims that if Chazal make a definitive statement, it means that they know it to be unassailable. But how does he know this? If he is insisting that Chazal's unqualified statements are based on information extracted from Torah, then we can ask again, what on earth is the basis for this claim? Rav Hirsch and many others certainly didn't think so! Why couldn't Chazal have ever said something that was not from the Torah, and yet which they believed to be true? Is it really impossible for them to have gained knowledge from their intellect or from other sources, and to have considered it reliable?

And there are further problems here. Let's say that Chazal really did base a given statement on

knowledge that they had extracted from the Torah. Why does this necessarily mean that it is correct? That could only be the case if one considers Chazal to be absolutely infallible in such matters. Such a topic is beyond the purview of this post, but suffice it to note that it is far from undisputed.

Furthermore, as noted, it is significant that we see that Rabbi Meiselman in fact considers Chazal infallible. For the most a person can do is to *believe* that something he says to be unassailable. You can never *know* that something you say is unassailable - unless you are infallible.

However, I want to concentrate on the theme of this post, which is intellectual dishonesty. We have here a twofold recipe for intellectual dishonesty. First is that engendered by Rabbi Meiselman considering definitive statements to be infallible, and only non-definitive statements to be potentially errant. The result of this is that when faced with a statement about the natural world in the Gemara that is obviously incorrect, he, and those who follow his approach, are forced to classify it as a non-definitive statement - no matter how unreasonable it is to do so. In other words, he has to argue that a certain claim (i.e. that a given statement of Chazal was only tentative) is definitely true, even if under other circumstance the evidence would not warrant such a claim. That is a recipe for intellectual dishonesty.

The second recipe for intellectual dishonesty comes when we have taken Rabbi Meiselman's step and relegated a statement to being tentative instead of definitive. Here, Rabbi Meiselman agrees that it can potentially be in error; however, he maintains that it is forbidden for us lowly denizens of the 21st century to actually point out such things:

"...Even when a tentative statement of Chazal is in error... the prerogative of declaring any of their teachings mistaken is granted to *them*, not to us. For anyone other than Chazal themselves, questioning their conclusions is called being *melagleg al divrei Chachamim* - "mocking of the words of the Sages" - a crime with very serious consequences." (p. 108)

(By the way, I'm not sure how he reconciles this with his claim that Chazal's tentative statement about the existence of mud-mice is in error. Is he not being *melagleg al divrei Chachamim* by his own definition?)

Here we have another recipe for intellectual dishonesty. Rabbi Meiselman admits that some of Chazal's tentative statements may be in error, but he says that it is forbidden for us to explain the Gemara in that way. A similar claim was [issued](#) on the blog of Rabbi Meiselman's protege, and assistant in writing his book, Rabbi Dovid Kornreich (who seems to diverge from his rebbe by claiming that Chazal are theoretically fallible even with regard to definitive statements):

"The problem for the traditional camp is that while Chazal were not infallible and made mistakes, we do not have the authority to declare Chazal mistaken based on our own knowledge or judgment. Only other members of Chazal have the authority to point out their mistakes. So there would be a problem if Chazal truly believed in the existence of a spontaneously generated creature that we know today does not exist. This problem is neatly avoided by simply examining

the relevant gemara and realizing that there is nothing which forces the conclusion that Chazal actually believed its existence."

Whereas Kornreich claims that his problem has been "neatly avoided," in fact what he has done is to apply the intellectual dishonesty mandated by Rabbi Meiselman. Since it would be unacceptable to interpret Chazal as having made a mistake, he is forced to reinterpret Chazal such that they are not actually asserting the existence of such a creature, no matter how unreasonable it is to explain the Gemara in such a way. Reader Akiva Cohen neatly encapsulated the problem with Kornreich's claim, which equally applies to Rabbi Meiselman:

"In other words: Chazal are not infallible, but we need to treat them like they are. So even though that may lead to non-*emes* interpretations of the Gemara (since we may be interpreting the Gemara wrongly in order to avoid claiming "Chazal erred" in a situation in which Chazal actually erred), that's better than saying "Chazal erred."

This, by the way, strikes me as the worst of both worlds: take all the supposed "faith-destroying" impact of acknowledging that Chazal were fallible when relying on their own intellect, and add to it the new (and more legitimately) faith-destroying acknowledgement that your interpretations of Gemara are not driven by *emes*, but by an express denial of a possibility that you acknowledge is a possibility."

So, to sum up, Rabbi Meiselman has given two recipes for intellectual dishonesty. One is that all scientifically-problematic statements of Chazal *must* be explained as being tentative, even if there is no reasonable basis for doing so. Second is that even tentative statements may not *ever* be explained as actually *being* errant, even though this might indeed be the case.

Anyone following Rabbi Meiselman's approach is going to be taking a course in intellectual dishonesty. For some, it will be help them feel happy and superior; for others, the cognitive dissonance will cause great inner turmoil.

## Rambam on Demons and Segulos

The Gemara is replete with discussions about demons, in both aggadic and halachic contexts. In my monograph, [\*Wrestling with Demons: A History of Rabbinic Attitudes to Demons\*](#), I documented how most authorities accepted the reality of demons (and for understandable reasons). Several authorities, however, rejected the existence of demons, notwithstanding the fact that Chazal believed in their existence. The most prominent of these was Rambam. While many religious authorities did not accept that Rambam denied the existence of demons, this appears to have been because they *could not* accept it, due to their own religious convictions - I have yet to discover a scholar who does not believe in demons, and yet thinks that Rambam did believe in them. But there were certainly plenty of authorities who recognized that Rambam denied the existence of demons - most significantly, the Vilna Gaon.

The topic of demons is of some relevance to the topic of Chazal and science. After all, here we have Rambam and other Rishonim denying the existence of creatures whose existence was attested to by Chazal. For most of us, however, when considering Rambam's attitude to Chazal and science, it's not especially significant to look at his view on demons. The reason for this is that Rambam already wrote explicitly in the [Guide](#) that "You must, however, not expect that everything our Sages say respecting astronomical matters should agree with observation, for mathematics were not fully developed in those days; and their statements were not based on the authority of the Prophets, but on the knowledge which they either themselves possessed or derived from contemporary men of science." There is every reason to presume that if this is what Rambam felt about astronomy - an area of science with great relevance to Torah and halachah - all the more so would this be true of other areas of science.

On the other hand, for [Rabbi Moshe Meiselman](#), Rambam's position on demons would be extremely relevant. This is because Rabbi Meiselman denies that the quotation above from the *Guide* demonstrates that Rambam believed Chazal to be limited to the science of their era. He insists - extremely unreasonably, as I have demonstrated previously - that Rambam was only saying that Chazal erred in a few limited cases of astronomy. With everything else that Chazal said, Rabbi Meiselman claims, Rambam believes that Chazal were correct.

Furthermore, the existence of demons, as the Vilna Gaon makes clear, is inherently related to other supernatural phenomena such as *segulos*. Rabbi Meiselman devotes an entire chapter to the topic of Rambam and *segulos*, which he states to be of relevance to the topic of Torah and science, since it demonstrates Rambam's views regarding non-scientific phenomena. Rabbi Meiselman claims that Rambam did indeed believe in the efficacy of *segulos* - and he further argues that this is the "mainstream view." However, while Rashba - who was passionately committed to the existence of non-scientific phenomena - did indeed ascribe this view to Rambam, numerous others understood that Rambam denied the efficacy of *segulos*.

In a [recent post](#) at Torah Musings, Rabbi Gil Student states that although Rabbi Meiselman claims that Rashba's interpretation of Rambam "was adopted by many other authorities," Rabbi Meiselman does not name any, and Rabbi Student does not know of any. Rabbi Student further points out that despite Rabbi Meiselman's claim that the view of Radvaz, that Rambam denied the efficacy of *segulos*, was "not adopted by any other major interpreter of the Rambam," it was actually echoed by no less than the Chida and the Vilna Gaon, amongst others.

I do not know if Rabbi Meiselman considers himself wiser than the Vilna Gaon and all the other authorities who stated that Rambam denied the existence of demons and *segulos*. However, even if he considers them to be wrong, he should still acknowledge the existence of their views.

The reason why he doesn't acknowledge their views is obvious. It's because they fatally flaw his entire book, which is dedicated to claiming that no mainstream figure ever held that Chazal could be wrong in their claims about the world.

**UPDATE** - In the comments section, it was pointed out to me that the Vilna Gaon accuses Rambam of falsely reinterpreting the Gemara, not of disputing it. Thus, the Vilna Gaon's statement would not be relevant to claims about Rishonim stating that Chazal were wrong.

Did Rambam believe himself to be disputing Chazal, or did he convince himself that Chazal also did not believe in demons? I'm still looking into it. On the one hand, it's impossible to imagine how one could convince oneself that Chazal did not believe in demons. On the other hand, Rambam certainly convinced himself of very strange things regarding the Neviim.

If we consider the situation with astrology, Rambam claims that only a few sages believed in it (whether he was being diplomatic, or actually genuinely thought so, is an interesting question that is difficult to answer). However, even if only a few sages mistakenly believed in astrology or demons, that is still fatal to Rabbi Meiselman's claims.

## Chinese Dinosaurs and Challenging Camels

There are two breaking stories in the news that are of relevance to anyone interested in the field of Torah and science.

First is the [discovery](#) that Pompeii-like volcanic ash was responsible for the instant death of [thousands of species found as fossils in the Jehol beds in China](#). Actually, the relevance here is not so much the cause of death, but rather the fossil beds themselves. Thousands and thousands of fossils have been found in this location, including nearly 1000 species of invertebrates and 140 species of vertebrates. The latter category includes fossils of amphibians, reptiles, dinosaurs, pterosaurs, birds and mammals (you can see the full list at [this link](#)). These are all from species that no longer exist. The mammals, for example, are primitive species with splayed legs like those of reptiles.

For people who insist that the creation account in Genesis is to be taken literally as factual history, there is a big problem here. Are these fossils from Day Five or Day Six of creation? If they are from Day Five, then there should not be any fossils from terrestrial creatures, which were not created yet. But if they are from Day Six, then why are there only fossils of primitive species and none of contemporary species?

If somebody wants to simply admit that they have no answer for the scientific challenges, I'm fine with that. Because the other breaking story of relevance is "[Camel Archeology Contradicts Bible](#)" - that carbon-dating of the earliest known domestic camel bones shows that they were introduced to Israel hundreds of years later than the patriarchs. A journalist contacted me for my comment, but I had nothing to say. I'm not a zooarcheologist and I have no means of refuting this claim. Nor do I know how

to reconcile such a thing with the Torah. Rav Kook writes that "we should not immediately refute any idea which comes to contradict anything in the Torah, but rather we should build the palace of Torah above it," but I don't know how to apply that in this case. (Fortunately, I am long past the stage of my life where such questions keep me awake at night. Now I stay awake at night agonizing over more pressing problems, such as how to best educate my kids, how to raise funds for my museum, and how to get my python to start eating again.)

In light of the fact that I have nothing to say with regard to the Camel Challenge, I can't complain if others want to have a similar lack of response to the Chinese Dinosaurs (although I think that it is wrong [to insist to non-charedi audiences that they should not even attempt to deal with such questions](#)). But what I do protest is if people claim that there is *no* challenge from the Chinese Dinosaurs. Rabbi Moshe Meiselman, for example, in [Torah, Chazal and Science](#) (p. 493) claims that it is forbidden to believe that the world is more than 5774 years old, and further insists that there is no legitimate scientific evidence challenging the Biblical account of creation. His purported rationale for this is that "the laws of nature were different back then." Rabbi Meiselman claims that scientists have no way of knowing otherwise, and that all their conclusions are based on an unproven premise that the laws of nature were always constant.

In fact, the consistency of historical processes is not a *presumption* of modern science - it is a *conclusion*, drawn from observations of the uniformity present in geology and other phenomena. This was the subject of the very first post that ever appeared on this blog, [William Smith and the Principal of Faunal Succession](#).

(In a possible attempt to counter this argument, Rabbi Meiselman claims on p. 504 that the results of a universe that developed under completely different laws of nature over six days perfectly *mimic* that of a universe that developed under a single set of laws over billions of years! I'm simply lost for words that such a proposal could be put in print, and that a book espousing such a thing can be taken seriously by anyone.)

The Chinese dinosaurs present another refutation of the notion that there is no scientific challenge to the literalist approach. Here we have amphibians, reptiles, dinosaurs, pterosaurs, birds and mammals, all of which happily (or unhappily) lived their lives and died, all before contemporary species appeared in the world. And yet Rabbi Meiselman and others would insist that all this presents no reason to believe that the world is any more than 5774 years old - and they insist that it is forbidden to believe otherwise. This is despite the statements of [numerous widely-respected Torah authorities](#) who [say](#) that it is perfectly acceptable to believe otherwise.

If people want to confess that they have no answer to challenges from science, that's fine. But don't take real challenges and claim that they have no basis. Especially if you're going on a crusade to claim that anyone saying otherwise is beyond the pale of Judaism.



## That's Bats!

*Parashas Shemini* lists the non-kosher birds. One is the *atalef*, mentioned at the very end of the list. The consensus of both Jewish tradition and modern academic scholarship is that the *atalef* is the bat.

Some people get very worked up about the fact that the bat is a mammal rather than a bird, which they perceive as a conflict with the Torah's divine authority. Now, while various rabbinic authorities [have pointed out](#) that the Torah is not always scientifically accurate, this case does not fall into that category. There is no “right” or “wrong” method of classification. A system of classification has no independent reality. It is simply a means by which we measure and describes the animal kingdom, depending upon our purpose. For the purposes of science, the animal kingdom is evaluated on its own terms, based on anatomy. For the Torah’s system of classification, the animal kingdom is presented in terms the relationship between animals and human beings, and their perception by the common person. Neither system is more correct than the other; they are just serving different purposes. In the Torah, anything birdlike is classified as *ohf* - including bats. This is not a scientific error, just a different system of language.

The Gemara, on the other hand, is another matter. In a curious passage, with no apparent *halachic* or *hashkafic* significance, it states as follows:

Everything that bears live young, nurses them, and everything that lays eggs, gathers food for its young, except for the *atalef*, which, even though it lays eggs, nurses its young. (*Bechoros* 7b)



In contrast to the Talmud’s statement, modern zoology asserts that none of the 950 species of bats lay eggs, and further asserts that there was never an egg-laying bat. An egg-laying bat would be completely contradictory to the neat nested hierarchy of the animal kingdom - and amongst all the millions of known species, no such exceptions have ever been found.

Could the Gemara be referring to something other than a bat? Rabbi Joshua Waxman has presented [a fascinating argument](#) that the Gemara is referring instead to a species of owl known as the stryx, which

does lay eggs, and was believed to nurse its young on milk. But, as Rabbi Waxman notes, this would still not make the Gemara scientifically accurate, since owls do *not* nurse their young.

Rabbi Moshe Meiselman, who insists in his book [Torah, Chazal and Science](#) that every definitive statement in the Talmud must be correct, and further insists that to say otherwise is heresy, takes a different approach regarding this statement about the *atalef*. Before the book was published, I [predicted](#) that Rabbi Meiselman would fail to address this Gemara. I was wrong - he addresses it at length (chapter 24). The reason why I did not think that he would discuss it is that I couldn't conceive of any way in which he could reasonably claim that the Gemara is scientifically correct. (See if you can spot the false assumption that I made.)

Rabbi Meiselman discusses this Gemara. And he argues that it does not present any scientific problem at all. He claims that the *atalef* is... the platypus.

No, I am not joking. Rabbi Meiselman claims that the *atalef* is the furry, mammalian, four-legged, web-footed, egg-laying, duck-billed platypus of Australia. He comments (p. 337) on the wonder of Chazal knowing about the duck-billed platypus: "In their day no one had ever seen one, nor could the Rishonim have imagined them; but Chazal knew that somewhere in the world they must exist."

Rabbi Meiselman acknowledges that this goes against the identification of the *atalef* given by the Rishonim. But he dismisses the Rishonim as having an inadequate mesorah and mistakenly understanding matters in light of the flawed science of their era. It is not clear to me why he considers this perfectly acceptable to state with regard to the Rishonim, but heretical to state with regard to Chazal.

To support his claim that the *atalef* is the platypus, Rabbi Meiselman argues that it doesn't make sense to claim that the Gemara is repeating an erroneous belief that bats lay eggs, since this Aristotle and Pliny recognized that bats do not lay eggs. Yet this is hardly sufficient reason to prefer the platypus. Chazal were not always in sync with Greco-Roman views - unlike the Greeks, [they did not know](#) that the sun passes on the far side of the earth at night. A Google search for "do bats lay eggs" brings many thousands of results, revealing that even in the scientifically-literate 21st century, there is much popular confusion about this matter - certainly such a belief would have been vastly more widespread in antiquity. (Also, as noted above, the Gemara may have been referring to a bird that was believed by the Greeks to lactate, rather than to an egg-laying bat.)

Rabbi Meiselman further argues that Chazal not have mistakenly believed that bats lay eggs, if they observed them closely enough to know that they nurse their young. But even close observation of bats nursing would not lead to the conclusion that there are no eggs, just that one had not discovered them yet. Furthermore, in any case there is no need for close observation to conclude that bats nurse their young - one can just draw this conclusion from its generally mammalian physiology.

Positing that Chazal believed in egg-laying bats (as many people still do) or lactating owls (as was common in antiquity) is infinitely more reasonable than proposing that they knew of the duck-billed platypus! How could they have known of the existence of the platypus? Rabbi Meiselman vaguely asserts that they knew it from "their understanding of the spiritual underpinnings of the world." He does not



explain how understanding the spiritual underpinnings of the world leads one to conclude that there is a duck-billed platypus. Additionally, as discussed at length in my monograph on [Sod Hashem Liyreyav](#), there is scant traditional support for such a notion. Furthermore, if their understanding of the "spiritual underpinnings of the world" was [not sufficient](#) to enable them to realize that the sun passes on the other side of the world at night rather than doubling back behind the sky, it is rather unreasonable to propose that it was sufficient to enable them to decipher the existence of the duck-billed platypus.

(UPDATE: Note that Rabbi Meiselman does not claim that they knew *specifically* of the platypus. Rather, he claims that they knew that there must be another creature which, like the bat, has characteristics of both birds and non-birds. He also claims that they knew that this creature must have a different combination of those characteristics than bats do. Rabbi Meiselman provides no support for either of these two extraordinary assertions. Furthermore, if they knew that there must be other animals with other combinations of bird/non-bird characteristics, why limit it to a mammal that lays eggs? By this logic, there must also be a fish with feathers and an amphibian with a beak!)

But there is another powerful reason why Rabbi Meiselman's case is absurd. He is not arguing that the *atalef* of Scripture is a platypus, because that is listed amongst the category of *ohf*. So he argues that Chazal used the same name as the *atalef* of Scripture, which he agrees is probably a bat, yet here referred to a different animal. But consider how astonishingly misleading this is making Chazal out to be. Instead of giving the platypus any kind of unique name or description and informing us that it lives in Australia, they chose instead to use a name that the Torah uses to refer to a creature that also has mixed characteristics of mammals and birds, the bat, thereby misleading every student of the Gemara for the last 1500 years to mistakenly believe that they were talking about the same creature!

(Furthermore, if Chazal knew of the exceptions to the rule that egg-laying animals don't lactate, why didn't they mention the echidna, pictured here?)



So, Rabbi Meiselman prefers to posit that Chazal were able to figure out the existence of the duck-billed platypus, which they misleadingly referred to with the same name as the bat, rather than positing that just as Chazal subscribed to the ancient belief that the sun travels behind the sky at night, they likewise subscribed to the widespread belief that bats lay eggs.

In perhaps the most remarkable twist of logic, Rabbi Meiselman concludes that “the very case that people cite as a challenge to Chazal is actually another demonstration that their knowledge was derived not from contemporary wisdom but from Torah itself.” But Rabbi Meiselman has not in any way proved that they actually derived this view from Torah. Furthermore, the issue is whether their knowledge is divinely correct, not where they derived it from. Chazal derived aspects of their understanding of the heavens being solid from Scripture, but this does not mean that it was correct!

Personally, I think that [Rav Hirsch's approach](#), which is [very well-founded in Chazal, the Geonim, the Rishonim, and the Acharonim](#), is the only reasonable explanation. According to this approach, there is no "problem" here, per se. "Chazal were the sages of God's law - the receivers, transmitters and teachers of His *toros*, His *mitzvos*, and His interpersonal laws. They did not especially master the natural sciences, geometry, astronomy, or medicine... we do not find that this knowledge was transmitted to them from Sinai." Thus, Chazal were simply relating an ancient and erroneous belief that bats lay eggs (or that owls nurse their young). Presenting this approach to the Gemara does not diminish the honor of Chazal. And nor, unlike the platypus claim, does it diminish the honor of the one presenting it.

## The Bats, The Platypus, And The Echidna

In my post of last week, "[That's Bats!](#)", I discussed the Gemara's claim that "Everything that bears live young, nurses them, and everything that lays eggs, gathers food for its young, except for the *atalef*, which, even though it lays eggs, nurses its young." I observed that this reflects a [widespread](#) but erroneous belief that bats lay eggs. I also critiqued the view of [Rabbi Moshe Meiselman](#), that the *atalef* of the Gemara refers to the platypus (which has the same name as the *atalef* of the Torah, which is the bat), on the grounds that (a) they would not have referred to the platypus with the entirely misleading name of a different creature that is popularly thought to lay eggs, and (b) they would not have known about the platypus, which lives in Australia.

Pursuant to publishing the post, I received a complaint that I did not properly explain Rabbi Meiselman's view. In this post, I will endeavor to do so more fully. But, as you will see, it merely makes his approach all the more problematic and downright bizarre.



Rabbi Meiselman does not claim that Chazal knew about the platypus *per se*. They had never been to Australia, nor had they received a vision of a platypus. Rather, he claims that they knew, "from their study of the blueprint of Creation," that there must be an animal, somewhere in the world, which lays eggs and nurses its young. He further seeks to explain why they would call the platypus *atalef*, which is the name of the bat in the Torah. Rabbi Meiselman explains that just as there is a bird called *tinshemes* and a *sheretz* called *tinshemes*, due to their sharing various characteristics, there is also a "bird" called *atalef* (the bat) and a quadruped called "*atalef*" (the platypus), which share significant characteristics. But what are these characteristics by which the platypus earns the same name that the bat earned as an *ohf*? Rabbi Meiselman first suggests that the platypus, like the bat, has characteristics of both mammals and birds - it is furry, yet possesses a bill and duck-like webbed feet. Alternately, he suggests, the platypus is like the bat in possessing special adaptations for maneuvering in the dark - the bat uses echolocation, and the platypus uses electroreception and mechanoreception (it has tens of thousands of tiny receptive organs on its bill).

That is Rabbi Meiselman's view. I will now present three reasons as to why it is unreasonable in the extreme and does not even assist in removing scientific error from this Gemara. Frankly, I don't really care if he, or anyone else, wants to believe that the *atalef* of the Gemara is the platypus. The problem is that he is using this in service of his claim that anyone who believes that the Gemara is making an erroneous statement about bats is an unsophisticated heretic.

### **I. Why Describe the Platypus as an *Atalef*?**

First of all, as discussed at length in the previous post on this topic, if Chazal wanted to tell us about a creature that nobody (including themselves) had seen, the very last thing that they would have done is called it simply by the name of a known animal, the *atalef*. This is especially true in light of the fact that the term *atalef* already referred to the bat, which many people mistakenly believe to lay eggs, and would thus assume to be the animal that Chazal were describing.

Rabbi Meiselman seeks to explain why the platypus has significant similarities to the bat that earn it the name *atalef*. His first way of explaining this is that the platypus is intermediate between mammals and birds in not just one way, but a number of ways. The platypus is furry and nurses its young like other

mammals, yet it possesses a bill and duck-like webbed feet as well as laying eggs like birds. Accordingly, the term *atalef* deservedly refers to the platypus. (In a footnote, Rabbi Meiselman adds that it is "interesting to note" that certain platypus genes resemble those of birds, though he admits that this is not of significance here, since halachah deals only with what can be perceived by the ordinary observer without special equipment.)

But it is very far-fetched to posit that the bat and platypus share the same name due to their both having characteristics of both mammals and birds, when the characteristics of birds that they have are fundamentally different! The platypus cannot fly; instead, it has completely different similarities to birds. Furthermore, webbed feet are not even particularly relevant to birds - some birds possess webbed feet and most do not, just as some mammals (beavers, otters, seals) possess webbed feet and most do not.

Furthermore, the bat's ability to fly is what *classifies it* in the Torah as a bird. It is what earns its *position*, not its *name* (just as the names of the other birds in the list do not reflect their ability to fly). Anything about the name and significance of the *atalef* would only reflect the ways in which it is *different from* other birds.

Now let's turn to Rabbi Meiselman's second proposal, that the platypus shares the same name as the bat because *atalef* is defined as a creature that has (either instead of, or in addition to, intermediate status between mammals and birds) a special adaptation to the dark. In the case of the bat, this is echolocation, and in the case of the platypus, he explains, this is electroreception. But this does not work and is silly for several reasons:

1) The echidna also has electroreceptors (albeit fewer than the platypus), which it uses for locating food in the undergrowth at night. (To this I presume Rabbi Meiselman would respond that it doesn't use them for maneuvering, only for locating food. This would appear to be just another contrivance.)

2) Why on earth would this random feature be a defining characteristic of the *atalef*? Rabbi Meiselman seeks to make a pattern by noting that the mole, which according to Rashi is also called the *atalef*, also has adaptations to maneuver in the dark. But aside from this being a view unique to Rashi, Rabbi Meiselman repeatedly states that the Rishonim did not have a clear mesorah regarding zoology and often misinterpreted Chazal's statements because of this. Suddenly Rashi is grounds to create a new definition of the *atalef*? Rabbi Meiselman himself freely rejected the mole as an *atalef* in his previous explanation, when he said that the *atalef* has to have birdlike characteristics!

3) And finally, the clincher. *Echolocation and electroreceptors?! Echolocation* in bats was only discovered in 1940, using modern scientific technology. Electroreceptors were only detected in the platypus in 1984 by special investigative techniques, 180 years after the platypus was discovered. Rabbi Meiselman himself admits that halachah deals only with what can be perceived by the ordinary observer without special equipment. Indeed, he uses this to claim that Chazal described lice as spontaneously generating for this reason. But he wants to argue that the term *atalef* is based on echolocation and



electroreceptors?! And if we're just talking about an ability to maneuver in the dark - well, there's nothing novel in that, all kinds of nocturnal animals and birds can do that.

In summary, there is no reasonable basis for saying that the platypus should earn the name *atalef*. And even if there were, Chazal could and should still have referred to it as "*another type*" of *atalef*.

## II. How Would Chazal Have Known About Such A Creature?

The assumptions being made by Rabbi Meiselman are astounding. Let's make a list of all the things that Rabbi Meiselman claims that Chazal knew "from their study of the blueprint of Creation":

1. The bat is not the only creature which shares characteristics of mammalian and non-mammalian species.
2. Other creatures that share characteristics of both groups, which are thus also called *atalef*, do so in ways that differ from the bat.
3. In the entire world, there is exactly one creature in this class that has the mammalian/non-mammalian features of milk-secreting and egg-laying.

Note that Rabbi Meiselman gives no explanation whatsoever as to *how* their study of Torah led to this presumed knowledge. And it's not as though there is a lot of material in the Torah about the *atalef* to work with. On the other hand, there is an enormous amount of material in the Torah about cosmology, and yet Chazal were not able to figure out that the sun goes on the other side of the world at night rather than behind the sky!

Let us also recall that no Torah scholar before Rabbi Meiselman ever thought that Chazal were talking about anything other than the *atalef* of the Torah.

## III. The Problem with the Echidna

Meanwhile, Rabbi Meiselman is so focused on explaining why the word *atalef* can refer to both the bat and the platypus that he has apparently overlooked another very basic problem with his entire approach. Even supposing he is able to explain why the term *atalef* refers to the platypus, and to thereby claim that the Gemara is not making a mistaken statement about bats, the



Gemara's rule would *still* be wrong! This is because the Gemara mentions the *atalef* as the sole exception to the principle that "every egg-laying animal does not nurse its young." But the echidna (of which there are two species) is another egg-laying animal that nurses its young!

One might think that a person who believes the *atalef* to refer to the platypus can say that it also refers to both the echidna. But Rabbi Meiselman cannot do this. He does not explicitly say why, but there are several good reasons.

First, in order not to have it look completely lame that Chazal would use the term *atalef* for the platypus, Rabbi Meiselman has already argued that there are several reasons for using this term. The reasons that he gives (a beak, webbed feet) do not apply to the echidna.



Second, the platypus and the echidna are very different animals. The platypus is a mostly aquatic animal that resembles a beaver. The echidna is terrestrial and looks like a porcupine. One cannot claim that two such different animals are the same *min*.

There is a third reason why it is problematic to say that the term *atalef* includes both the platypus and the echidna. If any creature can be called an *atalef* merely because it lays eggs and nurses its young, then the Gemara's entire rule becomes meaningless. Remember, too, that according to Rabbi Meiselman, Chazal did not know *specifically* about the platypus and echidna; thus there could be any number and variety of egg-laying lactating animals in the world. The Gemara said that there is a lone exception to the principle that "every egg-laying animal does not nurse its young" - but if *atalef* can include any number and variety of animals that are an exception to this rule, then the Gemara is merely saying that "every egg-laying animal does not nurse its young, except for all those that do," which would make no sense.

Thus, Rabbi Meiselman, by arguing that the *atalef* is a term that is well suited to the platypus, and thereby made the description of the *atalef* correct, has simply forced a different error into the Gemara's rule.

Again, I must stress that I don't really care less if Rabbi Meiselman, or anyone else, wants to believe that the *atalef* of the Gemara is the platypus. The problem is that he is using this in service of his claim that anyone who believes that the Gemara is making an erroneous statement about bats is an unsophisticated heretic.



## R. Meiselman: Rav Soloveitchik Was A Spectacular Failure

No, Rabbi Moshe Meiselman did not explicitly say that Rav Soloveitchik was a spectacular failure. But he has effectively made such a claim. After all, R. Meiselman claims that virtually all of Rav Soloveitchik's disciples are actual heretics!

In the most recent issue of *Jewish Action*, Rabbi Gil Student [reviews](#) two books: Jeremy Brown's [excellent book on Copernicus](#), and Rabbi Moshe Meiselman's disappointing and disturbing [Torah, Chazal and Science](#). Set alongside the article is an [interview](#) with one of Rav Soloveitchik's most prominent disciples on the more yeshivish end of the spectrum, Rav Hershel Schachter, Rosh Yeshivah of RIETS, on the topic of science and Torah. The interview begins as follows:

**Jewish Action:** Did the *Tannaim* and *Amoraim* learn science from the Torah or from the scientists of their generations?

**Rabbi Hershel Schachter:** The Gemara says in the first chapter of *Bechoros* that just like the Sages had rules regarding how to derive halachah from the Torah (*middos shehaTorah nidreshes bahen*), they also had rules about deriving science from the Torah. We don't even know how to use the rules for halachah, let alone for science. But the *Tannaim* did. However, this does not mean that they learned all their science from the Torah. They clearly also relied on the scientists of their time, as we all do. Sometimes this means that they relied on what was later discovered to be the scientific mistakes of their time.

This position is, of course, perfectly normative. It echoes countless statements by Chazal themselves, as well as being stated implicitly by many dozens of Rishonim and Acharonim, and most explicitly by Rabbeinu Avraham ben HaRambam and Rav Hirsch. But Rabbi Moshe Meiselman believes this to be utter heresy. Rabbi Meiselman further claims that Rav Soloveitchik's understanding of Rambam's category of *makchish maggideha* would be applicable to such a position.

So, according to Rabbi Meiselman, Rav Schachter and all those to the left of him - which is virtually all of the Rav's *talmidim* - are heretics. I wonder how he would account for Rav Soloveitchik's spectacular failure to produce disciples that adhere to the very basics of Jewish belief.

## Confronting Dinosaurs

How do you evaluate whether a professed expert on Torah and science is worth his salt? One step (of many) is to see whether he is ready to confront dinosaurs. Is he ready (and has he already thought about) some very basic questions. Like, when the dinosaurs live? Did they live at the same time as people? Did they all live at the same time as each other? And if so, why are their fossils consistently found in different layers of rock?

Interestingly, the Christian Young Earth Creationists (YECs) are eager to confront dinosaurs. At the \$27 million Creation museum in Kentucky, there are prominent animatronic dinosaur exhibits, complete with models of the humans that the Christian creationists believe lived alongside the dinosaurs. (As far as I know, they do not explain why the thousands of dinosaurs fossils are all found in layers of rock that do not have fossils of humans or modern animals.) The Christian YECs are interested and excited to talk about dinosaurs from within their religious worldview, in which they are very confident.

Yet there is no parallel to this amongst Orthodox Jewish YECs. Whether they ultimately claim that dinosaur bones are an incredible work of art created by God, or that they lived before the Flood, one finds that Orthodox YECs simply do not want to discuss the topic at all. This is especially significant in that dinosaurs are probably the most basic of all Torah-science questions. In fact, this is one of the reasons why I put a photo of the skeleton of a Tyrannosaurus rex on the cover of [The Challenge Of Creation](#) - not just to scare away charedi readers, but also to stress that I am willing to confront dinosaurs.

Perhaps the most striking example of this aversion to confronting dinosaurs is with Rabbi Moshe Meiselman's [Torah, Chazal and Science](#). Despite the book being over *eight hundred pages* long, it does not once discuss dinosaurs!

The only reference to dinosaurs at all in Rabbi Meiselman's book appears on p. 531, where Rabbi Meiselman rejects the approach of the Tiferes Yisrael that dinosaurs are from a previous epoch. He also indirectly expresses a viewpoint on dinosaurs in a footnote on p. 500, where he refers to a change in animal behavior after the Mabul, and references the Ramban to Bereishis 9:5, which suggests that before the Mabul, animals were all herbivores. That might have been a reasonable suggestion in Ramban's time, but it's simply laughable to propose it seriously today. Is Rabbi Meiselman claiming that Tyrannosaurus rex, velociraptors, and saber-toothed cats all ate grass and leaves?! Aside from the fact that their physiology clearly shows that they were carnivores, we actually have fossilized remnants of their stomach contents and excrement, which show that they were carnivores - as well as a famous fossil of two dinosaurs that died locked in combat.



While Rabbi Meiselman does not explicitly discuss dinosaurs, he does tell us what he believes to be the (only legitimate) approach to the age of the universe. Unfortunately, his approach to this is rather muddled. Often he says vaguely that "time was measured differently back then", which could theoretically mean that there was indeed an age of dinosaurs, but he also insists that it is forbidden to modify traditional beliefs regarding the universe being a few thousand years old (p. 493). He further claims that there is no legitimate scientific evidence challenging this because the laws of nature were different back then and thus all methods of dating the world as being more than a few thousand years old are invalid. Rabbi Meiselman claims that scientists have no way of knowing otherwise, and that all their conclusions are based on an unproven premise that the laws of nature were always constant.

In a [previous post](#), I have noted that the consistency of historical processes is not a *presumption* of modern science. Rather, it is a *conclusion*, drawn from observations of the uniformity present in geology and other phenomena. This was the subject of the very first post that ever appeared on this blog, [William Smith and the Principal of Faunal Succession](#).

(In a possible attempt to counter this argument, Rabbi Meiselman claims on p. 504 that the results of a universe that developed under completely different laws of nature over six days perfectly *mimic* that of a universe that developed under a single set of laws over billions of years! I'm simply lost for words that such a proposal could be put in print, and that a book espousing such a thing can be taken seriously by anyone.)

But aside from all the scientific evidence that the laws of nature were *not* different back then, what about the dinosaurs? And the therapsids? And the woolly mammoths?

Forget abstract jargon about radioactive decay and cesium atoms. Think about something tangible and familiar, such as animal life. The fossil evidence clearly shows that there were dinosaurs and all kinds of other creatures which lived before people (since no fossils of contemporary creatures are found in the same strata). These animals lived and died and fought and ate and bred - we even find dinosaur nesting sites. Did all that happen in the space of twelve hours? Did it happen in a universe in which the laws of gravity, the speed of light, and everything else - the very fabric of natural law - was drastically different from what we see today?



And it's not as though there was only one period of prehistoric creatures. The fossil record shows beyond doubt that there were numerous distinct periods. The therapsids lived before the dinosaurs; the dinosaurs lived before the mammoths. And even among dinosaurs, different layers of rock reveal distinct eras. Stegosaurus, Brachiosaurus and Allosaurus are never found in the same layers of rock as Tyrannosaurus rex, Triceratops, and Velociraptor. The conclusion is that each existed in a different period; the former lived in a period which has been termed the Jurassic, while the latter lived in the Cretaceous period. This is not part of some evil conspiracy by scientists, nor the result of mistakes on their part. Any paleontologist could win instant fame by finding a Tyrannosaurus rex fossil in Jurassic rocks - but nobody has ever done so, which shows that T-Rex lived much later, in the Cretaceous.

**We see in the rocks that there were countless generations of all kinds of animals, living in distinct periods, leading ordinary animal lives. This is clearly a process that takes many thousands, even millions of years. To describe it as all occurring in one day is simply ridiculous, unless one is taking the word "day" to mean something other than "day." It is not remotely meaningful to talk about "time being different back then." Countless generations of creatures lived and died, in distinct eras - how is it not legitimate to describe that as taking a long period of time?**

**In fact, I would say that an even stronger question is, how can a person write an 800 page book purporting to present the sole legitimate perspective on these topics, and repeatedly claim to be the person most qualified to speak about these things, and not even address this most basic of questions? Is he really that afraid to confront it, or has he never even thought about it? If the former, well, then even the Christians have him beat. If the latter, then he has no place presenting himself as any kind of authority on this topic, let alone the greatest authority.**

**Future parts of this critique will be published online and added to the index at <http://www.rationalistjudaism.com/2013/10/torah-chazal-and-science.html>**